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RAILWAY AGE

THE STANDARD RAILROAD WEEKLY FOR ALL

JUNE 23, 1952

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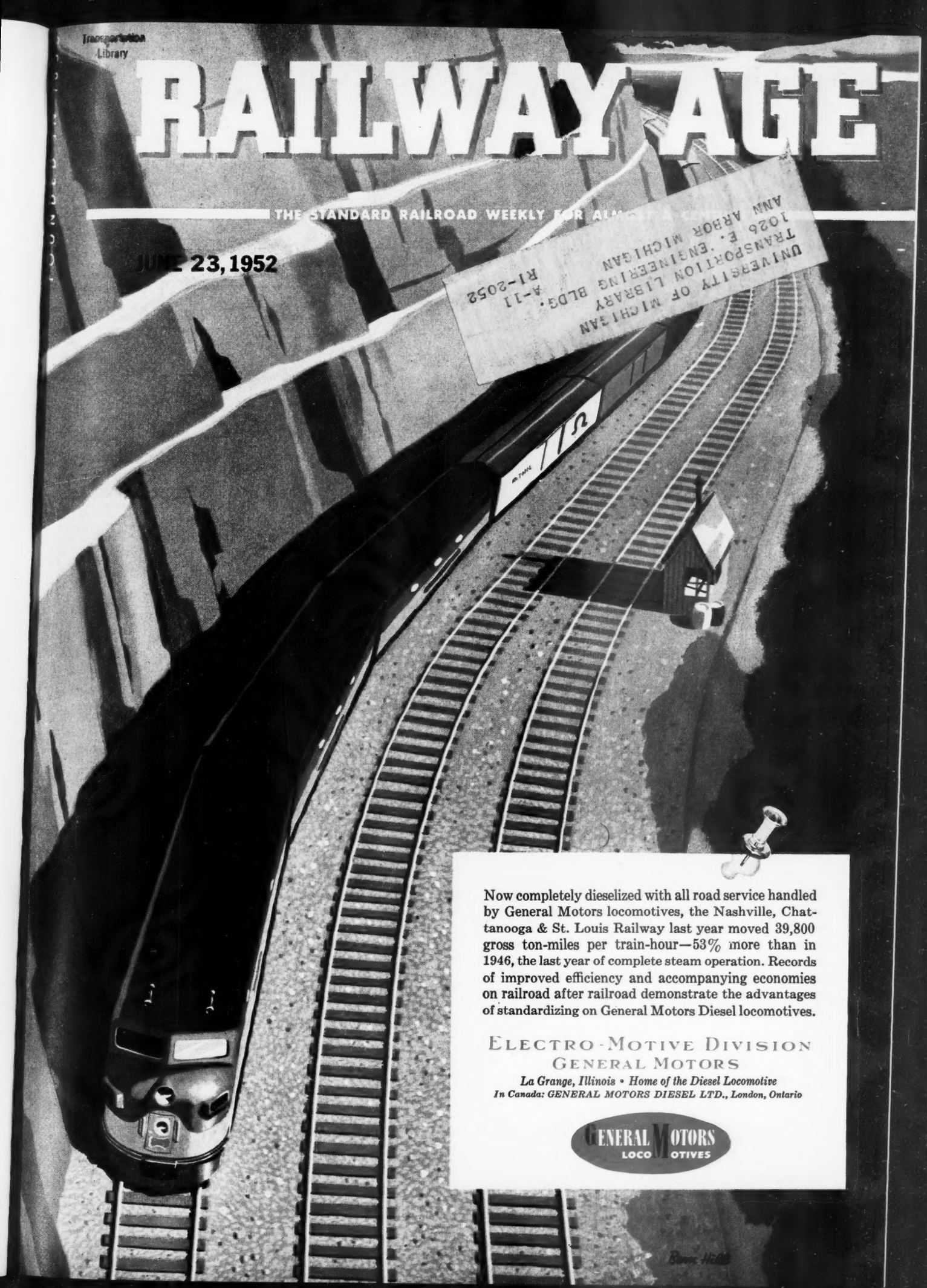

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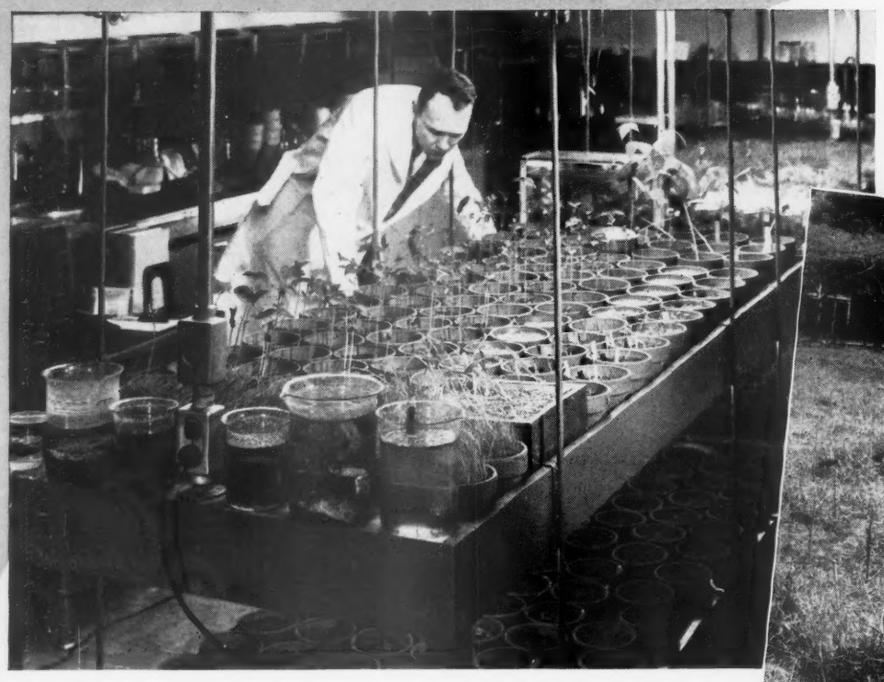

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Vol. 132, No. 25 June 23, 1952

RAILWAY AGE

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Railway Steel-Spring Division

AMERICAN LOCOMOTIVE COMPANY

WEEK AT A GLANCE

CURRENT RAILWAY STATISTICS

Operating revenues, four months
1952 ..... $3,434,950,070
1951 3,291,838,624

Operating expenses, four months
1952 ..... $2,677,624,722
1951 2,598,177,896

Taxes, four months
1952 ..... $ 409,483,233
1951 375,476,456

Net railway operating income, four months
1952 ..... $ 290,914,109
1951 251,321,653

Net income, estimated, four months
1952 ..... $ 186,000,000
1951 153,000,000

Average price railroad stocks
June 17, 1952 ..... 62.59
June 19, 1951 ..... 52.96

Car loadings, revenue freight
23 weeks, 1952 16,612,042
23 weeks, 1951 17,436,873

Average daily freight car surplus
Week ended June 14, 1952 37,701
Week ended June 16, 1951 22,424

Average daily freight car shortage
Week ended June 14, 1952 1,696
Week ended June 16, 1951 8,995

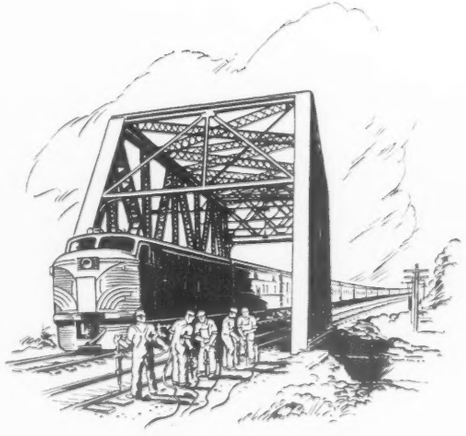
Freight cars delivered
May 1952 6,857
May 1951 9,774

Freight cars on order
June 1, 1952 103,910
June 1, 1951 150,628

Freight cars held for repairs
May 1, 1952 97,566
May 1, 1951 91,505

Net ton-miles per serviceable car per day
March 1952 (preliminary) 1,000
March 1951 1,061

Average number railroad employees
Mid-April 1952 1,229,835
Mid-April 1951 1,286,802



In This Issue . . .

THIS WEEK at San Francisco the Mechanical Division of the A. A. R. holds its 26th annual meeting. The detailed program for the three-day session is published on page 63, immediately followed by an explanation of the way in which mechanical research activities of the A. A. R. have been reorganized by consolidation of activities and changes in personnel, to provide for more effective and integrated operation. Beginning on pages 36 and 67 are two groups of short articles, mostly illustrated, describing recent improvements in motive power and rolling stock products and new devices for cars and locomotives. An editorial on page 62 discusses some of the major problems confronting the division.

MECHANIZATION OF ACCOUNTING PROCEDURES, as well as simplification of tariffs and other problems of general concern to the industry, absorbed the attention of members of the A. A. R.'s Accounting Division in their recent annual meeting at Detroit—a meeting which is reported in detail, beginning on page 80.

"IN FAVORABLE MESH FOR THE FIRST TIME IN MANY YEARS" are the factors of costs, traffic and rates, asserted Pierre Bretey, a leading railway security analyst and former president of the National Federation of Financial Analysts Societies, in an informal talk in Detroit on June 11. He said the railroads are just beginning to enjoy the accumulated benefits of dieselization, roadway rehabilitation and yard modernization. With the high gross revenues now earned, points saved in transportation and wage ratios "produce a fantastic leverage" in earnings on railroad stock. He asserted that there is an increased interest in railroad securities by open-end type investment trusts, which must obtain higher yields than are possible from higher-priced industrial securities.

ANOTHER ARTICLE in the series by E. W. Coughlin, on ways and means to greater car efficiency, begins on page 73. In it, Mr. Coughlin discusses particularly the delays and increased costs which can result from excessive weighing, and the steps which local railroad forces can take to eliminate such unnecessary weighing.

THERE ARE OPPORTUNITIES on the railroads for qualified engineering graduates! In fact, the PRR's J. M. Symes said in a recent Philadelphia address, abstracted on page 76, it is doubtful "that any other industry can offer more."

WEEK AT A GLANCE

AFTER A FEW WEEKS of comparatively low activity, the rail equipment market—at least in the diesel locomotive field—took a sharp and sudden upturn recently, with orders reported in the news columns for 213 units. Biggest buyer was the Seaboard, which purchased 60, but several other roads also got into the act.

In Washington . . .

"A LITERAL FULFILLMENT" of the railroads' "pledge" to use the "added revenue" realized from the latest Ex Parte 175 rate increase to "provide new equipment" was strongly urged by Defense Transport Administrator James K. Knudson in a June 18 address to the Central Western Shippers Advisory Board. Mr. Knudson necessarily coupled to his admonition to the railroads, recognition of the fact that steel for freight cars has not had the "top priority consideration" which he thinks it should have, but warned that the "apparent reluctance" of the railroads to order more cars is also "defeating" the effort to build up the national freight car supply.

THE LATEST MONTHLY COMMENT of the I.C.C.'s Bureau of Transport Economics and Statistics appears to lean a little more heavily even than such "Comments" normally do on statistical information of interest to the railroad industry. Perhaps the most important article in this current "Comment" is one showing that capital expenditures in this year's first quarter were well above those for the corresponding period of last year, and are likely to remain so. Other articles, covered in separate stories in the news section, show that "manufactures and miscellaneous" paid nearly half of the total freight bill for 1951; that net income of large freight forwarders was 22 per cent less in 1951 than in 1950; that it cost the railroads $1.39 in 1951 to collect one dollar of diner and buffet revenue; and that the average rail coach load of revenue passengers in 1951 was only slightly above the average airplane load.

IT MAY OR MAY NOT BE, as Commissioner Alldredge said in his dissenting opinion, "simply a precursor of what is to come," but the railroads as a whole may find some small comfort in the I.C.C.'s dismissal of a $728,000 government reparations complaint against the Southern. The nature of the complaint and the I.C.C.'s reasons for dismissing it, are set forth in the news columns.

CURTIS M. YOHE, vice-president (operations) of the Pittsburgh & Lake Erie, has been elected president of that company, as reported in last week's Railway Age, *and as detailed in the news columns of this issue. Mr. Yohe, who has been with the P&LE since 1919, succeeds Gustav Metzman, president of the parent New York Central, and is succeeded in turn by John F. Nash, previously general manager of the Boston & Albany.*

. . . And Elsewhere

LOCOMOTIVE ENGINEERS LIVE LONGER — or so it would seem from the 50-year veterans' luncheon to be staged by the Illinois Central in Chicago on June 26. Of the 63 employees to receive gold annual passes in recognition of their half-century of service, more than one-third are locomotive engineers. Others include agents, chief dispatchers, section foremen, local surgeons and clerks. In addition there will be one dispatcher, one telegraph operator, one train auditor, one passenger trainman, one engine foreman and a train porter, plus three general officers: L. L. King, general purchasing agent, W. S. Morehead, manager of stores, and T. K. Williams, superintendent of the Memphis division.

First Quarter Capital Expenditures Were 22.2 Per Cent Above Last Year

Gross capital expenditures made by Class I line-haul railroads in this year's first quarter were 22.2 per cent above those made in last year's first quarter—$345 million as compared with $282 million. This was shown by reports to the Interstate Commerce Commission's Bureau of Transport Economics and Statistics, which were summarized in the latest issue of the bureau's "Monthly Comment."

Future Estimates

All but four of the 131 reporting roads also submitted estimates of their prospective expenditures for the second and third quarters. Adding these estimates to the first-quarter's "actual," the bureau arrived at a prospective nine-months total of $1.072 million. That would be 7.3 per cent more than the total ($999 million) for last year's first nine months.

The four roads which failed to file estimates for this year's second and third quarters made first-quarter expenditures of "about $4 million," the bureau said. The accompanying table, reproduced from the "Comment," is the bureau's summary of the reports and estimates.

Actual and Estimated Gross Capital Expenditures—Class I Railways

Period	Number of roads	Road	Equipment	Total	Per cent of total: Road	Per cent of total: Equipment
		Thousands	Thousands	Thousands		
Actual 1951:						
1st quarter	131	$67,109	$215,137	$282,246	23.8	76.2
1st nine months	131	247,258	752,080	999,338	24.7	75.3
Actual 1952:						
1st quarter	131	73,870	271,134	345,004	21.4	78.6
Estimated 1952:						
2nd quarter	[1]127	97,392	274,762	372,154	26.2	73.8
3rd quarter	[1]127	105,214	249,910	355,124	29.6	70.4
Total:						
1st nine months 1952, actual and estimated	...	276,476	795,806	1,072,282	25.8	74.2
Percent of change:						
1st quarter 1952 vs. 1951	...	+10.1	+26.0	+22.2	...	...
1st nine months 1952 vs. 1951	...	+11.8	+ 5.8	+ 7.3	...	...

[1] Estimate not furnished by four roads.

Range of Percentage Rate Increases On Important Commodities Is Wide

Post-war rate increases made by the railroads on important commodities have ranged from 41.3 per cent on iron ore to 91.6 per cent on l.c.l., according to estimates made by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. The estimates are set out in the accompanying table, which is reproduced from the latest issue of the bureau's "Monthly Comment."

L.C.L. Increase

As to the increase on l.c.l., the bureau supplemented the table's showing with this statement: "Including the effect of action of the commission in Docket No. 28300 (the general class-rate case), the cumulative increases on classification rated less-carload traffic moving within Official territory has been 123.1 per cent, while the increase within Southwestern territory has been only 64.5 per cent." (*Railway Age*, June 2, page 11, and June 9, page 17).

It was also explained that the estimates in the table assume that intrastate increases have followed the pat-

Estimated Overall Percentage Increases in Freight Rates Authorized Since June 30, 1946—Important Categories of Commodities

	Commodity group	Estimated cumulative percentage increase since 6/30/46[1]
I	Products of Agriculture (C.L.)	66.4
	Grain and grain products	70.6
	Citrus fruits	55.1
	Other fresh fruits	53.5
	Fresh vegetables	57.5
	Other products of agriculture	79.5
II	Animals and Products (C.L.)	84.4
	Livestock	77.2
	Meat and edible packinghouse products	88.4
	Other animals and products	86.5
III	Products of Mines (C.L.)	[2] 61.4
	Coal and Coke	[2] 59.6
	Iron ore	[2] 41.3
	Other ores and concentrates	65.9
	Gravel, sand, rough and crushed stone	77.8
	Other products of mines	76.3
IV	Products of Forests (C.L.)	84.5
	Logs, fuel, and pulp wood	84.7
	Lumber (posts; poles, piling; ties; shingles; lath; box, crate, and cooperage material; plywood; building woodwork, etc.)	84.1
	Other products of forests	89.5
V & VI	Manufacturers and Miscellaneous (C.L.) and Forwarder Traffic (C.L.)	88.9
	Petroleum Products	84.0
	Vegetable oils	87.0
	Iron and steel group	90.1
	Aluminum, copper, lead, and zinc metals and alloys	85.2
	Cement, lime, and plaster	85.4
	Brick list, drain tile, etc.	78.5
	Sugar, sirup, and packaged foodstuffs	85.6
	Other manufactures and miscellaneous and forwarder traffic	90.2
VII	Less-Carload Traffic	91.6
	Grand total, all traffic	[1] 78.9

[1] Does not include for any commodity or commodity group extra authorizations allowed on traffic in Zone I of western trunk-line territory except as shown on the last line.
[2] Includes revisions of previous estimates.

tern of the interstate adjustments. Moreover, the percentages are averages for the country as a whole, and would "differ considerably for the various districts due to the different basic increases allowed."

KEEP EX PARTE 175 "PLEDGE" TO CONTINUE ORDERING CARS, KNUDSON TELLS RAILROADS

James K. Knudson, defense transport administrator, who is also a member of the Interstate Commerce Commission, expects "a literal fulfillment" of the railroads' "pledge" to use "added revenues" realized from the latest Ex Parte 175 rate increase to "provide new equipment."

Mr. Knudson made this statement in a June 18 address before the Central Western Shippers Advisory Board at Zion National Park, Utah. He also complained about steel allocations for the freight-car program, saying "it looks as though only enough steel for 8,000 cars will be provided in the fourth quarter of this year." The administrator also said:

"Just two months ago, the D.T.A. reexamined the freight car requirements and suggested higher construction goals of 11,000 cars per month, beginning in October 1952 and continuing to mid-1954. These goals received Defense Production Administration approval. . . .

"It presently appears that two things are defeating this program. One is the apparent reluctance of the railroads to order more cars. Their order books will be exhausted well before the program is completed—at present writing about 150,000 cars before. This is a source of present worry. The railroads pledged to the I.C.C. in Ex Parte 175 that they would use their added revenues to provide new equipment. I, for one, let my vote be influenced by that pledge because I know this country needs well-equipped railroads. . . .

"The fact that the commission order in Ex Parte 175 places a termination date (February 28, 1954) on the increased rates should be of little depressing significance, so far as the railroads are concerned in connection with their pledge, because whether that date is stated or not, shippers could petition the commission at any time for a review of the increased rates. . . . Railroad credit sources should not, therefore, be alarmed by the presence of the termination date in the order. . . .

"The other thing defeating the car building program is the failure of D.P.A. to allocate sufficient steel to build up to 11,000 cars a month. . . . This is a bad situation, particularly when almost all other uses of steel may be, in effect, decontrolled. I still insist that freight cars are of top priority consideration."

St. Lawrence Resolution Pigeonholed by Senate

By a close vote of 43 to 40, the Senate on June 18 sent back to its Foreign Relations Committee the resolution to approve the United States-Canada agreement for construction of the proposed St. Lawrence seaway and power project. The recommital, after several days of debate, was generally interpreted as an action which would shelve the resolution for the present session of Congress.

The resolution is S.J.Res.27. In reporting it to the Senate last April, the Foreign Relations Committee did so "without recommendation." President Truman has made several appeals for approval of the seaway, the latest having been an "eleventh-hour" plea made shortly before the Senate's vote to recommit the resolution.

Government Rate Complaint Dismissed

The Interstate Commerce Commission has dismissed a government complaint assailing rates on imported bauxite ore moving from Mobile, Ala., to Bynum and Huntsville Arsenal, and from New Orleans, La., to those points.

The government claimed generally that a lower rate over a circuitous route was applicable under an intermediate point rule. It asked the commission to find unreasonable the Section 22 quotations tendered by the railroads and paid by the government under protest. Reparations totaling $728,841 were asked. The traffic in question moved between June 1947 and June 1950.

A majority of the commission, with Commissioners Alldredge and Mahaffie dissenting, ruled that the rate, which the government claimed was applicable, did not apply on shipments from Mobile to Bynum. This rate was substantially below the quotation rate, which was itself well under the applicable tariff rate. A similar situation existed with respect to rates on ore out of New Orleans.

Early in its discussion of the case, the commission referred to a 1923 case in which it held that the statute of limitations in section 16(3) of the Interstate Commerce Act runs to the government as well as to private shippers. "We see no reason for now adopting a different interpretation," the commission said. Two of the commissioners, Splawn and Knudson, said this statement was unnecessary in view of the overall decision to dismiss the government complaint.

This proceeding, which was entitled *United States v. Southern et al.*, was not one of the 17 reparations cases in which the government is assailing rates paid on shipments of various commodities during World War II. Commissioner Alldredge, in his dissent, called this case "simply a precursor of what is to come."

"Manufactures and Miscellaneous" Paid Nearly Half of 1951's Freight Bill

Traffic in the Manufactures and Miscellaneous group accounted for 48.46 per cent of the gross freight revenue reported in 1951 by Class I railroads. This compared with 35.14 per cent in 1929, although the Manufactures and Miscellaneous group's "share" of the total tons originated rose only about three percentage points during the 22-year period—from 24.65 per cent to 27.48 per cent.

The 1951 proportions of revenue were below those of 1929 for all other commodity groups, although the proportions of tons originated were up in the cases of Products of Agriculture and Products of Mines. The foregoing, and other like comparisons, are set out in the accompanying table, which is reproduced from the June 13 "Monthly Comment," issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission.

Percentage Relation of Tonnage Originated and Gross Freight Revenue, by Commodity Groups, to Totals for All Groups

Group	Tons originated				Gross freight revenue			
	1929	1939	1950	1951	1929	1939	1950	1951
Products of agriculture	8.62	10.16	9.54	9.53	14.53	15.31	12.95	12.85
Animals and products	1.86	1.67	1.06	0.97	4.76	4.92	3.39	3.13
Products of mines	55.10	55.11	55.15	55.46	28.05	28.00	24.47	24.78
Products of forests	7.08	5.56	5.82	8.86	7.16	6.12	7.13	6.89
Manufactures and miscellaneous[1]	24.65	25.85	27.63	27.48	35.14	38.18	47.73	48.46
All L.C.L. freight	2.69	1.65	0.80	0.70	10.36	7.47	4.33	3.89
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Includes forwarder traffic.

It Cost $1.39 to Get $1 Of Diner Revenue in 1951

Class I railroads incurred diner and buffet-car expenses of $1.39 for every $1 of diner and buffet revenue collected in 1951. This was shown by figures in the latest "Monthly Comment" issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission.

The exact expense figure was $1.388, and it was slightly less favorable than the cost-per-dollar ratio of 1950, which was $1.384. The bureau noted that the costs involved are the direct expenses of diner and buffet operations only. They include nothing for the cost of transporting dining cars or "overhead."

The 1951 revenues from diner and buffet services totaled $79.6 million, an increase of 14 per cent above the 1950

It takes so little to PREVENT an accident
HOME SAFETY requires care in many things. Impress on the youngsters that articles like skates should never be left where they might trip someone.
JOB SAFETY asks for special care as to clothing. Long ties loose jackets, awkward gloves near running machines can cause expensive mishaps. Keep "streamlined"!
READING
DRIVING SAFETY demands extra care at railroad crossings. Always have brakes in good condition, always use them. The habit of stopping completely may save you from a costly and painful accident. Years ago, the Reading pioneered a warning: STOP—LOOK—LISTEN. Observing it makes a railroad crossing as safe as a park drive.
Published in the interest of Safety by the Reading Railway System

Don't spend your holidays in a hospital
NEVER assume a train isn't coming as you approach a railroad crossing. Stop, look, and listen till you're sure. Make this an even stricter rule as pleasant weather takes you out more and more. Cooperate with the railroads' warning devices, and crossings will be as safe as your own street corner.
NEVER dive into a stream or pool where the depth is unknown. Caution your youngsters about the dangers of shallow water and hidden rocks.
NEVER start a saw before brushing away the scraps and replacing the guard. An injury that occurs in a second may take months in mending.
RAIL ROAD CROSSING
STOP ON RED SIGNAL

Accidents we prepare for seldom happen
AT HOME warn the children constantly of traffic dangers. Don't let them play in the streets, teach them to obey signals, and to cross at crossings
AT WORK make a practice of using sharp tools. You have better control, and need less pressure. But keep the tools in a safe place!
ON THE HIGHWAY this summer, keep alert—especially when approaching railroad crossings. Obey the signs, lights, or bells installed for your safety. Enjoy your trips through the country, and spare yourself a trip to the hospital. You can't win a battle with an on-rushing train, but if you remember that one might be there, a railroad crossing is as safe as your own street corner.

THE READING CONDUCTS AN UNUSUAL SAFETY CAMPAIGN

Something out of the ordinary in safety campaigns—in which safety at home and on the job is tied in with safety at rail-highway grade crossings—is currently being carried on by the Reading through the medium of newspaper advertisements of the type reproduced herewith.

Because it serves the country's most densely populated area, and has exceptionally high traffic density on its own rails, the Reading management believes its grade crossing accident potential is well above the average for railroads as a whole.

Its present campaign against such accidents, however, is based, as the accompanying typical advertisements show, on promotion of general safety, with the grade crossing problem treated as only one phase of safe living.

The campaign was inaugurated last March 1, with a series of 13 advertisements inserted once a week in 186 online weekly, semiweekly and small daily papers. It has now been extended to the Philadelphia metropolitan dailies, with the size of the ads increased to three columns. In all ads, as shown, the name of the railroad is purposely "played down." Plans are now under way to continue the campaign with radio and television spot announcements, beginning next fall.

While the campaign is necessarily "negative," in the sense that it is impossible to make any precise evaluation of results, Reading officers feel that if it averts a single crossing accident it will produce an adequate return on the money spent. There has, to date, been a definite amount of favorable comment from newspapers, from automobile clubs and from shippers, and no unfavorable reaction—nor any demand for crossing elimination.

Moving spirits behind the campaign—which is tied in with the road's continuing program of safety promotion through family safety rallies and safety training schools for employees—are J. A. Fisher, president, E. P. Gangewere, vice-president, operations and maintenance, and J. J. McCool, superintendent of safety. Advertisements, which the Reading says it will make available to interested persons or organizations, are prepared under the general direction of its public relations department.

Dining and Buffet Revenues and Expenses of 21 Large Railways

(Dollar items in thousands)

District, region and railway	Dining and buffet revenues (Account No. 131)		Dining and buffet expenses (Account No. 441)		Ratio of expenses to revenues (Per cent)	
	1951	1950	1951	1950	1951	1950
Eastern dist.						
N.Y., N.H. & Hart.	$2,479	$2,276	$2,540	$2,568	102.5	112.8
New York Central	9,377	8,875	12,349	11,580	131.7	130.5
Baltimore & Ohio	2,751	2,380	4,090	3,458	148.7	145.3
Pennsylvania	10,129	8,745	13,105	11,376	129.4	130.1
Pocahontas reg.						
Chesapeake & Ohio	1,102	952	1,728	1,447	156.8	152.0
Southern reg.						
Atlantic Coast Line	2,183	1,819	2,644	2,144	121.1	117.9
Louisville & Nashville	1,293	1,147	1,682	1,402	130.1	122.2
Illinois Central	1,961	1,787	2,527	2,206	128.9	123.4
Seaboard Air Line	1,645	1,603	2,222	2,025	135.1	126.3
Southern	2,187	1,845	2,575	2,186	117.7	118.5
Western dist.						
Chicago & No. Western	2,158	1,858	3,287	2,776	152.3	149.4
C. M. S. P. & Pacific	2,265	1,948	3,378	2,996	149.1	153.8
Great Northern	1,666	1,403	2,953	2,471	177.3	176.1
Northern Pacific	948	808	1,300	1,102	137.1	136.4
A. T. & S. F. and affiliated Cos.	7,208	6,090	11,271	9,438	156.4	155.0
C. B. & Q.	2,193	1,905	3,084	2,820	140.6	148.0
C. R. I. & P.	2,118	1,823	3,133	2,486	147.9	136.4
Southern Pacific	6,699	6,254	8,643	8,213	129.0	131.3
Union Pac. and leased lines	5,550	4,476	9,769	8,213	176.0	183.5
Missouri Pacific	1,333	1,123	1,514	1,289	113.6	114.8
Texas & N. O.	1,197	931	1,470	1,176	122.8	126.5

take of $69.8 million. Meanwhile, however, the direct expenses went up 14.3 per cent—from $96.7 million to $110.5 million. Thus, 1951's aggregate loss of $30.9 million exceeded the 1950 deficit by $4 million.

The accompanying table, reproduced from the "Comment," shows these revenue and expense figures for 21 large roads (those reporting more than $1 million of diner and buffet revenues or expenses in 1951). In discussing this showing, the bureau noted that 1951 ratios ranged from 102.2 per cent in the case of the New Haven, to 177.3 for the Great Northern.

Potential "Post-Diesel" Savings, T. A. A. Report, Make Boston Analyst "Optimistic" on 10-15-Year Rail Outlook

"A certain amount of optimism . . . except for possible labor developments," that "the next decade will see a steady strengthening of the whole railroad industry" was expressed at the annual meeting of the Boston Security Analysts Society on June 11 by Robert E. Thomas, manager of railroad investments of Keystone Custodian Funds.

Mr. Thomas, whose subject was "Looking Ahead with the Rails," based his optimism on the facts that "substantial economies can still be realized after a railroad is 100 per cent dieselized," and on what he described as the "very good" chances for passage in 1953 of "some major legislation."

Three Sources of Savings

There are, he said, "three possible sources of large savings over the next 10 to 15 years . . . [which] taken together possibly would approximate in importance the ultimate total saving from dieselization." These three sources Mr. Thomas listed as "licking the hot box problem"; "construction of ultra-modern push-button yards and terminals to further reduce labor costs and speed up train movements"; and "more effective freight car utilization."

While indicating his opinion that the answer to the hot box problem lies in general use of roller bearings on freight cars, the speaker conceded the existence of certain obstacles to their widespread adoption—"money"; the fact that roller bearing equipped cars "would be in service on foreign lines most of the time"; and "difference of opinion among railroad engineering people."

He concluded, however, that "nothing will be accomplished without a start. Perhaps the first encouragement ought to be a per diem charge sufficiently high to fairly compensate owning railroads for the greater initial investment in roller bearings. With a higher per diem the more progressive railroads might then embark on the purchase of cars equipped with roller bearings. The rest would follow along in due course if the operating experience of the pioneers was favorable."

The use of roller bearings, he continued, "is related to the second possible source of large savings," because "the major disadvantage of the use of roller bearing equipped cars today" is that "they roll faster and farther than plain bearing cars for which existing yards are engineered. . . . Before embarking upon major programs to rearrange and modernize the yard and terminal setup, the railroad industry should decide whether it is eventually going to roller bearings in freight service."

The third potential source of future savings—better car utilization—depends in part upon "reduction in numbers of yards and terminals and modernization of remaining yards," and in part upon "cooperation of shippers," which, Mr. Thomas said, calls for "a real educational job" by railroad traffic officers.

Chances for Legislation

The speaker's expressed hope for "success in the effort to overhaul our antiquated laws" was based in large part on the preliminary report of the Cooperative Project on National Transportation Policy of the Transportation Association of America, which he discussed in considerable detail. (*Railway Age*, June 2, page 95, and June 9, page 51.)

While not predicting "successful passage of all the recommendations of the T.A.A.," he said it would be "simply inconceivable that [the report] will not make a real impression upon Congress." The report, he added, is evidence that "other forms of transportation have finally begun to appreciate the predicament of the railroads" and that "many shippers have come around to the same belief and have begun to share the concern of transportation people regarding the dangers of government ownership." He called it "no small achievement" that "a large number of men—some of them bitter competitors—can sit down in the same room and come to an agreement."

If the potential savings can be realized and the recommended legislation enacted, Mr. Thomas expressed the opinion that "fewer investors would tend to look upon railroad securities with jaundiced eyes," and would "capitalize railroad earnings far more generously."

Elliott and Arpaia Get Truman Nod for I.C.C.

Martin Kelso Elliott, an Indiana Republican, and Anthony F. Arpaia, Democrat of Connecticut, have been nominated by President Truman to become Interstate Commerce Commissioners. Mr. Elliott would replace Commissioner Clyde B. Aitchison, whose latest term expired December 31, 1949. Commissioner Aitchison has continued in office "until his successor qualifies."

Mr. Arpaia would fill the vacancy created by the resignation last April of Commissioner John L. Rogers. The new appointee has, for several years, been vice-president and general counsel of the Adley Express Company, a New Haven, Conn., trucking firm.

The nominations of Mr. Elliott and Mr. Arpaia were sent to the Senate June 17. That same day President Truman wrote Commissioner Aitchson, congratulating him on his long record of service with the commission.

"I appreciate your willingness to serve as you have for more than two

years in addition to your term and am sure you will be greatly relieved to know that I am now ready to appoint your successor," the President said. He noted the commissioner was first appointed to the I.C.C. in 1917 by President Wilson.

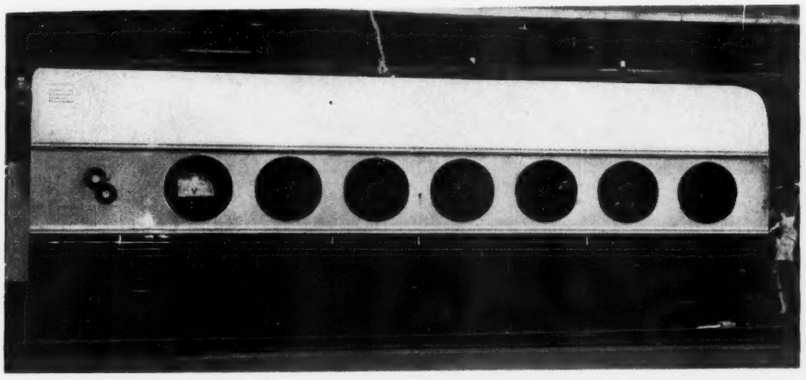
Mr. Elliott, who would succeed Commissioner Aitchison, was born in Indiana in 1908. He is a graduate of DePaul University and the Harvard Law School. He was in service in World War II, and emerged as a Lieutenant Colonel in the Judge Advocate General's Department, the army's legal division. Since the war he has practiced law in Indiana and in Washington, D. C., and in 1947-1949 served as assistant counsel to a Senate subcommittee on Privileges and Elections. He now lives in Washington, D. C.

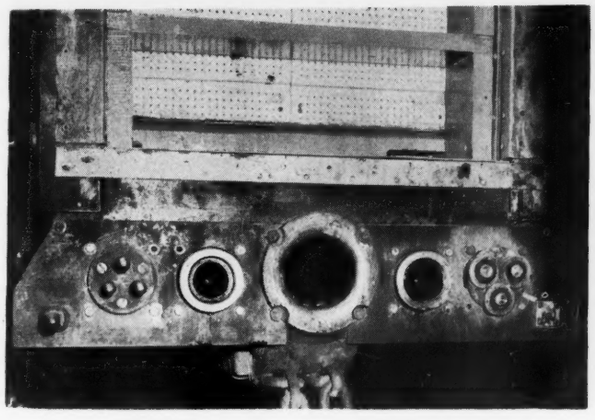
Mr. Arpaia, who would fill the Rogers' vacancy, was born in 1897. He was graduated from Yale, and received his law degree from Yale Law School. He has been in law practice since 1924, and is a member of the Association of I.C.C. Practitioners.

During World War II Mr. Arpaia was director of the New Haven Defense Rental Area, and was subsequently chief attorney and state director for the Office of Price Administration. He joined the Adley trucking firm in 1945.

Commissioner Aitchison, 77, was born at Clinton, Iowa, February 22, 1875. He was educated at Hastings College, Nebr., the University of Oregon, and obtained his Ph.D degree at American University, Washington, D. C. Admitted to the bar of Iowa in 1896, he subsequently practiced law at Council Bluffs, and at Portland, Ore.

Between 1905 and 1917 Commis-





CHESAPEAKE & OHIO UNVEILS "TRAIN X" CAR

A single-axle, trailer-type coach, built by the Pullman-Standard Car Manufacturing Company from designs developed by the Chesapeake & Ohio for its experimental "Train X," was displayed to executives of some 15 major United States and Canadian railroads on June 11 in a special run from Detroit to Plymouth, Mich., and return (*Railway Age*, June 16, page 17).

The "Train X" car (upper left) is approximately 31 feet long, or about one-third the length of a conventional car. The floor is two and one-half feet nearer the rails and the roof is three feet lower. The car is mounted on two rear wheels with a single axle and has a trailer type connection to the car ahead. As shown here it is disconnected from the special adapter car used to couple it to standard locomotives, and the forward end of the car (at right of picture) is supported by dolly wheels.

The experimental car seats 28 passengers (upper right). As displayed on June 11, the car is an engineering model and is not finished for regular service. The exposed wiring and various instruments have been installed to determine stresses, ride characteristics, temperature control, etc. The spring suspension design creates a pendulum effect so that the car banks into curves somewhat like a bicyclist, to provide passenger comfort even during high speed operations around curves.

"Train X" cars are designed to couple on impact (two lower pictures). Service lines are connected, valves are opened and couplings are locked by lifting the dolly wheels which carry the front end of a separated car. Lowering the dolly wheels unlocks the coupling, disconnects service lines and closes valves. This method of coupling and uncoupling is said to eliminate manual operations now performed between and under conventional cars. Wheels are rubber centered to lessen noise and permit higher braking ratios, while disk type brakes are installed outside of each wheel for easy access.

Economic studies, the C&O says, indicate that "Train X" in mainline service would save enough to pay for itself in from two to four years. The savings would be derived by reduction of weight to about one-third that of present lightweight equipment, by simplification of mechanical design, and by placing in a single head-end car most of the mechanical equipment now carried under each separate car.

sioner Aitchison was active in state regulatory activities in Oregon. He was one of the joint authors of the Oregon Railroad Commission bill, adopted by the state in 1907. In 1907 he was appointed to the state commission and was later elected to that commission in 1908 and 1912. He was chairman of the commission in 1911 and again in 1916.

Prior to his first appointment to the I.C.C. in September 1917, he served for more than a year as solicitor for the National Association of Railroad Commissioners. After joining the I.C.C. Commissioner Aitchison was chairman of that body in 1919, 1925, 1942 and 1947. The chairmanship is rotated among the 11 commissioners.

Another member of the commissioner's family, Miss Beatrice Aitchison, is widely known in transportation circles. A transportation economist, Miss Aitchison was with the I.C.C.'s Bureau of Transport Economics and Statistics for several years. She now heads the Transport Economics Division, Office of Transportation, Department of Commerce.

"A Remarkable Performance"

In his letter to Commissioner Aitchison, President Truman said that "few men in the entire history of our country have equalled your long record in the public service."

He called the commissioner's more than 33 years with the I.C.C. "a remarkable performance of which you should be most proud."

"I know that you have enjoyed the strenuous years and the arduous labors that now lie behind you," the President said. "In the years that lie ahead, I wish for you many hours in which you will be free to relax in whatever way brings you the most contentment."

REPRESENTATIVES OF THREE CENTURIES were on hand to help the New York Central celebrate the fiftieth birthday of its "Twentieth Century Limited" at New York and Chicago on June 15 (*Railway Age*, June 16, pages 51 and 82). At Chicago, (above) the celebration was highlighted by the appearance of girls wearing costumes of the nineteenth century, twentieth century and —perhaps—the twenty-first century. Looking on are Gustav Metzman, president of the NYC, Mayor Martin H. Kennelly of Chicago, and John J. Brinkworth, vice-president of the Central at Chicago. At New York) below), "Diamond Jim Brady" and some of his more glamorous friends, posed on a replica of the observation platform of the train of 1902. The girls presented a fashion show contrasting the latest in styles of 1902 with the styles of today, and distribued golden roses to all of the more than 300 passengers who rode the two sections of the "Century" operated on June 15.

Tennessee Intrastate Rates

The Interstate Commerce Comission has found that unjust discrimination against interstate commerce results from the refusal of the Railroad and Public Utilities Commission of Tennessee to authorize railroads there to apply the full Ex Parte 166 and Ex Parte 168 increases to their intrastate rates on coal and wood. At the same time, the I.C.C. has also found that unjust discrimination does not result from the Tennessee commission's refusal to approve intrastate adjustments in line with the interstate increases on agricultural slag, alfalfa meal, brick (fire or paving), phosphate rock, and sand (except common).

The I.C.C. report, by Commissioner Johnson, was in I. & S. No. 30720. Commissioner Splawn, dissenting in part, disagreed with the majority's finding with respect to the Tennessee rates on coal and wood. The commission withheld entry of an order, but stated that it would issue one unless it was advised that the adjustment called for would be approved by the Tennessee Commission

Additional General News appears on pages 84-89.

of the West...

Southern Pacific lubricates this 4500 hp freight locomotive with Sinclair GASCON Oil.

ON a never-to-be-forgotten day in 1869 the Southern Pacific's pioneer ancestor, the Central Pacific, met the Union Pacific at Promontory, Utah, to make trans-continental rail travel a reality.

From this historic opening of America's Western Empire down to the present, SP has been a pioneer in progress. Out of its vision and business courage have come today's fast freights and the magnificent streamliners "City of San Francisco," "Cascade" and "Shasta Daylight." During the past 33 years of Southern Pacific growth, Sinclair has played an important part in the vital factor of lubrication. Sinclair GASCON® OILS are used on many SP Diesels.

Yes, to get the utmost in *all* types of Diesel operation, America's top railroads and locomotive manufacturers agree that Sinclair GASCON OILS are unsurpassed. Today more than 80 U.S. railroads use these fine lubricants.

SINCLAIR RAILROAD LUBRICANTS

SINCLAIR REFINING COMPANY, RAILWAY SALES • NEW YORK • CHICAGO • ST. LOUIS • HOUSTON

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1952

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total 1952	Total (inc. misc.) 1951	Operating Expenses: Maint. Way and Structures: Total 1952	Total 1951	Deprec. and Retirements	Maint. Equipment: Total 1952	Total 1951	Deprec. and Retirements	Traffic	Transportation	Total 1952	Total 1951	Operating ratio 1952	Operating ratio 1951	Net from railway operation	Railway tax accruals	Net railway operating income 1952	Net railway operating income 1951
Akron, Canton & Youngstown	April	171	$425	....	$437	$457	$72	$72	$10	$52	$46	$16	$38	$131	$324	$322	74.1	70.3	$113	$42	$57	$48
	4 mos.	171	1,819	....	1,861	1,829	283	265	27	226	170	62	143	555	1,331	1,234	71.5	67.5	530	227	236	221
Atchison, Topeka & Santa Fe System	April	13,072	38,820	$4,617	47,956	46,589	7,418	7,606	689	9,719	9,840	1,666	1,199	15,186	35,551	35,949	74.1	77.2	12,404	7,222	5,101	4,345
	4 mos.	13,073	155,181	18,318	191,360	183,060	26,341	26,383	2,677	36,226	35,952	6,653	4,574	61,105	136,546	134,297	71.4	73.4	54,814	32,239	22,581	20,440
Atlanta & St. Andrews Bay	April	82	278	1	286	301	31	34	2	28	17	4	9	63	146	134	51.2	44.4	140	71	43	50
	4 mos.	82	1,207	6	1,245	1,178	142	138	9	93	78	16	34	256	586	540	47.1	45.8	659	348	206	188
Atlanta & West Point	April	93	297	39	386	365	58	55	6	60	63	11	14	148	304	325	78.8	89.0	82	35	30	—1
	4 mos.	93	1,189	192	1,585	1,511	195	200	21	241	222	45	60	614	1,211	1,244	76.4	82.3	374	196	119	47
Western of Alabama	April	133	335	36	415	381	50	51	6	70	72	14	15	138	297	308	71.5	80.9	118	62	52	24
	4 mos.	133	1,201	186	1,554	1,587	195	239	25	266	245	51	62	563	1,177	1,217	75.8	76.7	376	221	141	138
Atlantic & Danville	April	205	168	....	170	159	40	28	2	11	8	5	12	54	127	116	74.9	72.7	43	10	13	16
	4 mos.	205	659	....	669	610	155	112	8	44	32	19	46	208	498	445	74.5	73.0	170	39	55	62
Atlantic Coast Line	April	5,472	12,475	2,066	15,705	13,608	2,368	2,885	138	2,719	2,537	526	343	5,018	11,098	11,439	70.7	84.1	4,608	2,600	1,566	524
	4 mos.	5,472	49,281	9,521	63,613	55,749	8,856	12,406	530	10,620	10,000	2,102	1,463	20,476	44,075	46,762	69.3	83.9	19,538	12,300	5,722	2,243
Charleston & Western Carolina	April	343	577	4	597	548	124	158	4	107	87	39	18	175	441	450	73.9	82.0	156	70	79	35
	4 mos.	343	2,217	16	2,302	2,117	533	532	15	427	313	152	69	684	1,765	1,596	76.7	75.4	537	235	272	240
Baltimore & Ohio	April	6,187	31,258	2,004	35,667	36,850	4,686	5,167	398	7,343	8,226	978	914	14,286	28,786	30,205	80.7	82.0	6,880	2,556	3,369	3,192
	4 mos.	6,187	130,229	8,136	147,923	142,033	19,294	17,962	1,629	31,854	32,521	3,880	3,515	58,892	119,612	118,098	80.9	83.2	28,311	10,778	14,344	11,133
Staten Island Rapid Transit	April	29	250	52	306	282	53	57	12	34	37	—4	2	140	261	264	85.2	93.7	45	36	—21	—30
	4 mos.	29	1,013	203	1,229	1,154	203	208	47	149	146	14	6	583	1,059	1,059	86.2	91.8	169	145	—63	—106
Bangor & Aroostook	April	602	1,268	32	1,332	1,104	250	186	14	246	186	74	23	308	887	690	66.6	62.5	445	209	225	187
	4 mos.	602	5,746	148	6,089	4,350	970	709	65	977	667	270	78	1,579	3,852	2,731	63.3	62.8	2,237	1,058	989	676
Bessemer & Lake Erie	April	212	2,394	1	2,414	2,439	216	173	33	682	745	98	19	497	1,500	1,520	62.1	62.3	914	653	391	468
	4 mos.	212	6,597	3	6,687	6,797	798	678	82	2,556	2,480	384	71	1,789	5,588	5,382	83.6	79.2	1,098	1,137	764	1,146
Boston & Maine	April	1,701	5,567	890	7,226	7,214	1,351	1,258	188	1,162	1,227	168	121	3,100	6,053	6,035	83.8	83.7	1,173	552	317	267
	4 mos.	1,701	22,498	3,732	29,351	28,963	5,349	4,863	718	4,538	4,771	666	461	12,912	24,563	23,991	83.7	82.8	4,787	2,291	1,153	1,040
Cambria & Indiana	April	35	124	....	124	128	18	14	1	94	90	18	....	20	139	140	111.7	109.9	—15	56	39	47
	4 mos.	35	612	....	612	584	65	49	3	347	341	67	1	103	548	537	89.5	92.0	64	280	212	246
Canadian Pacific Lines in Maine	April	234	553	46	630	683	140	98	5	80	80	8	8	206	448	407	71.2	59.7	181	27	70	194
	4 mos.	234	2,940	217	3,271	3,005	455	354	20	481	375	33	30	1,140	2,161	1,796	66.1	59.8	1,110	120	608	807
Canadian Pacific Lines in Vermont	April	90	197	15	229	234	71	51	4	35	29	....	6	113	234	211	102.5	90.1	—6	13	—71	—42
	4 mos.	90	778	59	914	883	257	195	15	136	116	1	24	476	925	822	101.3	93.1	—12	52	—281	—207
Central of Georgia	April	1,786	3,199	230	3,813	3,688	639	683	44	623	660	99	131	1,537	3,136	3,349	82.3	90.8	676	343	246	80
	4 mos.	1,786	12,517	958	14,982	14,973	2,411	2,728	173	2,409	2,506	405	522	6,178	12,335	12,896	82.3	86.1	2,647	1,359	949	519
Central of New Jersey	April	411	2,708	475	3,498	3,528	510	430	74	646	528	82	60	1,812	3,186	3,029	91.1	85.9	312	416	—458	—260
	4 mos.	411	11,115	1,823	14,180	14,028	1,903	1,835	289	2,577	2,478	331	236	7,339	12,715	12,617	89.7	89.9	1,465	1,660	—1,685	—1,642
Central of Pennsylvania	April	207	1,593	4	1,654	1,473	232	189	13	407	353	75	26	462	1,169	1,074	70.7	72.9	485	86	653	634
	4 mos.	207	6,509	21	6,745	6,038	712	670	58	1,528	1,569	291	103	1,935	4,445	4,474	65.9	74.1	2,300	401	2,961	2,466
Central Vermont	April	422	733	55	857	898	172	151	12	164	174	12	16	404	801	761	93.5	84.7	36	43	—49	17
	4 mos.	422	3,159	248	3,664	3,598	651	567	68	668	638	50	63	1,696	3,253	2,978	88.8	82.8	411	175	7	202
Chesapeake & Ohio	April	5,117	26,972	747	29,202	29,326	4,272	3,976	327	6,184	5,675	1,421	636	9,435	21,749	21,326	74.5	72.7	7,453	3,830	3,891	3,616
	4 mos.	5,117	112,415	2,765	120,548	112,312	16,599	15,150	1,342	24,982	21,328	5,518	2,423	39,394	88,287	82,088	73.2	73.1	32,261	16,549	17,246	14,162
Chicago & Eastern Illinois	April	868	2,118	209	2,647	2,685	387	355	37	426	392	93	114	1,017	2,114	2,056	79.9	76.6	533	119	254	289
	4 mos.	868	9,149	995	11,455	10,887	1,392	1,398	116	1,728	1,555	440	456	4,229	8,510	8,150	74.3	74.9	2,945	1,141	1,384	1,161
Chicago & Illinois Midland	April	130	529	....	543	841	95	100	7	182	167	21	28	194	544	555	100.1	66.0	—1	16	—50	129
	4 mos.	130	2,440	1	2,503	3,155	353	397	30	761	633	83	119	824	2,228	2,154	89.0	68.3	275	173	3	455
Chicago & North Western	April	7,915	11,740	1,558	15,175	16,633	2,881	2,633	355	3,383	3,080	745	342	7,474	14,903	14,700	98.2	88.4	272	1,059	—996	363
	4 mos.	7,915	48,222	6,852	62,875	62,735	10,220	9,506	1,359	13,077	12,268	2,978	1,377	31,247	59,312	57,020	94.3	90.9	3,563	4,226	—1,937	—250
Chicago, Burlington & Quincy	April	8,808	15,917	1,335	19,380	21,278	3,708	3,341	583	3,064	3,259	697	434	7,253	15,253	15,236	78.7	71.6	4,127	2,441	1,410	2,222
	4 mos.	8,813	67,601	5,858	81,927	85,852	10,792	9,954	1,826	13,507	12,758	2,782	1,842	30,133	59,537	58,220	72.7	67.8	22,390	12,436	8,494	11,589
Chicago Great Western	April	1,474	2,621	9	2,780	2,900	501	441	38	344	438	119	100	966	1,996	1,993	71.8	68.7	784	266	261	287
	4 mos.	1,474	10,829	52	11,580	11,400	1,852	1,718	187	1,630	1,620	472	405	3,866	8,065	7,925	69.6	69.5	3,516	1,227	1,214	1,084
Chicago, Indianapolis & Louisville	April	541	1,556	59	1,725	1,735	320	307	21	279	293	64	94	609	1,409	1,396	81.7	80.5	316	118	122	119
	4 mos.	541	6,397	265	7,117	7,061	1,272	1,195	82	1,020	1,114	253	353	2,481	5,508	5,517	77.4	78.1	1,609	642	582	519
Chicago, Milw., St. Paul & Pacific	April	10,671	16,686	1,353	20,455	21,371	3,425	2,759	7	4,660	4,611	850	499	8,656	18,288	18,364	89.4	85.9	2,166	1,304	537	802
	4 mos.	10,671	69,564	5,985	84,485	82,685	11,757	10,244	40	18,751	17,214	3,700	1,883	36,548	73,115	70,793	86.5	85.6	11,370	6,541	3,380	3,009
Chicago, Rock Island & Pacific	April	7,916	13,684	1,521	16,832	16,924	2,159	2,031	246	2,829	2,709	501	479	6,206	12,480	12,550	74.1	74.2	4,352	1,917	1,795	1,403
	4 mos.	7,916	56,204	6,637	69,036	66,809	8,114	7,454	969	11,609	10,605	1,938	1,957	25,949	50,887	49,453	73.7	74.0	18,150	8,030	7,353	5,950
Chicago, St. Paul, Minn. & Omaha	April	1,617	1,954	140	2,352	2,658	484	478	46	444	478	88	64	1,293	2,412	2,701	102.5	101.6	—60	172	—437	—481
	4 mos.	1,617	8,980	691	10,688	10,296	1,645	1,596	180	1,759	1,769	353	262	5,820	10,008	10,138	93.6	98.5	680	735	—955	—1,304
Clinchfield	April	317	1,838	1	1,849	1,882	308	300	18	323	340	81	41	420	1,128	1,110	61.0	59.0	721	213	635	740
	4 mos.	317	8,019	4	8,065	8,168	1,094	1,079	70	1,309	1,292	326	163	1,859	4,567	4,419	56.6	54.1	3,498	854	3,124	3,555

Table continued on next left-hand page

job tested

IN DAY-AFTER-DAY OPERATION

Ashland special DIESEL

fuels and lubricants

Ashland diesel fuels are being used by about 20 of the leading railroads operating diesel equipment. On-the-job tests have proven them equal or superior to other available fuels.

Ashland's refining facilities have the great flexibility needed for producing fuels to any desired specifications. Careful laboratory checks and production controls assure absolute balance of fuel components to provide the best operating characteristics. These include stability, cleanliness, fluidity and ignition performance.

A number of Ashland-made lubricants have been chosen as superior by leading railroad maintenance engineers. Among these are "Ashland", "Valvoline" and "Na-re-co". All have been tested and are being proven on the job. Lubrication experience dating back to 1866 and a constant research program assure you of the finest lubricants for each specific purpose.

. . . complete line of lubricants for diesel equipment

ASHLAND OIL & REFINING COMPANY

ASHLAND, KENTUCKY

SUPPLY TERMINALS: Ashland, Ky. — Buffalo, N. Y. — Canton, O. — Cincinnati, O. — Cleveland, O. — Erie, Pa. — Evansville, Ind. Findlay, O. — Follansbee, W. Va. — Freedom, Pa. — Kenova, W. Va. — Kobuta, Pa. — Louisville, Ky. — Marietta, O. — Nashville, Tenn. — Niles, O. — Paducah, Ky. — Pittsburgh, Pa. — St. Elmo, Ill. — St. Louis, Mo. — Toledo, O.

REVENUES AND EXPENSES OF RAILWAYS

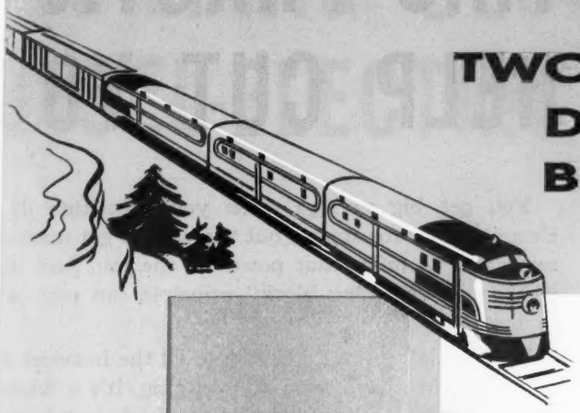
(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1952

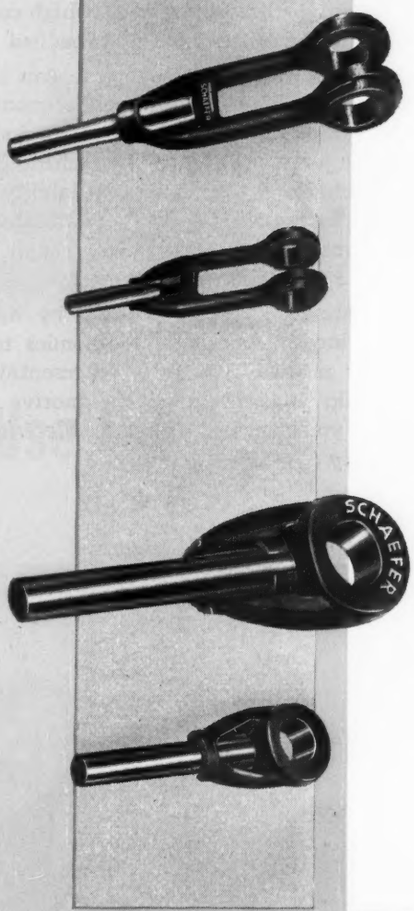
Name of road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total 1952	Total (inc. misc.) 1951	Operating Expenses: Maint. Way and Structures: Total 1952	Total 1951	Deprec. and Retirements	Maint. Equipment: Total 1952	Total 1951	Deprec. and Retirements	Traffic	Transportation	Total 1952	Total 1951	Operating ratio 1952	Operating ratio 1951	Net from railway operation	Railway tax accruals	Net railway operating income 1952	Net railway operating income 1951
Colorado & Southern	April	736	1,097	66	1,292	1,276	131	135	19	205	204	35	30	461	884	902	68.5	70.7	407	244	157	119
	4 mos.	736	4,304	325	5,143	5,013	531	549	78	854	748	141	116	1,892	3,627	3,528	70.5	70.4	1,516	893	555	483
Ft. Worth & Denver	April	804	1,511	141	1,811	1,760	275	266	25	242	263	32	58	672	1,340	1,349	74.0	76.6	472	155	206	151
	4 mos.	804	6,513	612	7,798	6,927	982	917	125	975	951	124	220	2,782	5,344	5,052	68.5	72.9	2,454	935	1,092	734
Colorado & Wyoming	April	40	119	....	216	262	34	103	—1	36	33	10	2	103	186	260	86.1	99.1	30	8	22	11
	4 mos.	41	647	....	1,076	1,070	128	154	11	146	102	36	4	450	769	748	71.4	69.8	307	188	113	142
Columbus & Greenville	April	168	147	....	152	208	36	45	4	28	29	6	4	49	136	150	89.7	72.4	16	22	1	27
	4 mos.	168	639	....	664	742	137	164	15	121	114	23	16	199	550	575	82.7	77.6	115	97	38	79
Delaware & Hudson	April	793	4,382	152	4,704	4,643	731	599	52	922	969	139	83	1,743	3,704	3,644	78.7	78.5	1,000	438	602	455
	4 mos.	793	18,179	665	19,510	19,128	2,385	2,156	223	4,017	3,876	571	326	7,471	15,032	14,490	77.0	75.7	4,478	2,324	2,390	2,142
Delaware, Lackawanna & Western	April	963	6,085	818	7,666	7,190	891	808	135	1,476	1,393	296	166	3,305	6,110	5,997	79.7	83.4	1,556	831	729	565
	4 mos.	964	24,451	3,252	30,730	28,320	3,164	2,940	522	5,770	5,344	1,167	660	13,575	24,249	23,250	78.9	82.1	6,481	3,414	3,138	1,876
Denver & Rio Grande Western	April	2,333	5,550	222	5,974	5,644	892	765	93	1,157	1,062	236	170	1,980	4,492	4,142	75.2	73.4	1,482	923	609	696
	4 mos.	2,333	23,063	1,002	24,946	23,376	2,950	2,485	354	4,633	4,374	914	690	8,404	17,824	16,303	71.5	69.7	7,122	4,012	3,089	3,451
Detroit & Mackinac	April	232	155	....	159	202	43	40	3	21	19	9	4	38	116	105	73.2	52.3	43	27	19	36
	4 mos.	232	566	2	586	710	172	160	11	78	81	32	16	152	459	431	78.3	60.7	127	83	61	101
Detroit & Toledo Shore Line	April	50	600	....	611	617	72	65	3	51	60	17	16	196	351	383	57.5	62.2	260	97	85	56
	4 mos.	50	2,717	....	2,754	2,710	298	285	15	240	225	67	58	816	1,465	1,466	53.2	54.1	1,290	491	419	312
Detroit, Toledo & Ironton	April	464	1,309	....	1,387	1,583	229	236	26	305	237	67	29	401	1,021	978	73.6	61.8	365	208	145	265
	4 mos.	464	6,016	1	6,362	6,792	769	778	112	1,505	1,017	267	116	1,668	4,284	3,855	67.3	56.8	2,078	1,083	866	1,230
Duluth, Missabe & Iron Range	April	567	4,326	1	4,945	4,464	571	579	65	689	647	78	10	1,871	3,288	2,797	66.5	62.7	1,657	364	1,346	1,414
	4 mos.	567	5,655	3	6,419	6,159	2,505	2,450	237	2,812	2,786	311	36	3,939	9,796	9,155	152.6	148.7	—3,377	699	—3,897	—3,215
Duluth, South Shore & Atlantic	April	539	618	5	659	713	129	99	9	151	120	20	25	233	555	537	84.2	75.3	104	27	40	124
	4 mos.	539	2,392	27	2,537	2,634	468	387	35	593	454	80	96	947	2,181	2,085	86.0	79.1	356	108	102	282
Duluth, Winnipeg & Pacific	April	175	400	1	406	487	85	71	4	75	62	2	6	206	381	344	93.7	70.6	26	34	—76	53
	4 mos.	175	2,513	4	2,542	1,900	295	256	16	323	256	8	21	1,021	1,689	1,342	66.4	70.6	853	180	323	188
Elgin, Joliet & Eastern	April	236	3,057	....	3,878	4,429	455	470	25	733	716	101	33	1,505	2,866	2,962	73.9	66.9	1,012	367	136	286
	4 mos.	236	14,017	....	17,494	17,348	1,570	1,566	98	2,881	2,692	400	130	6,816	11,997	11,233	68.6	64.8	5,497	2,392	865	1,148
Erie	April	2,242	11,990	593	13,683	14,460	1,884	1,987	226	2,471	2,251	464	340	5,642	10,986	11,345	80.3	78.5	2,697	1,096	1,171	1,272
	4 mos.	2,242	51,764	2,427	58,645	58,094	6,629	6,557	901	9,209	8,808	1,831	1,419	23,899	43,794	43,467	74.7	74.8	14,851	6,856	6,452	5,931
Florida East Coast	April	571	2,317	780	3,542	3,286	368	383	41	477	454	77	75	1,177	2,315	2,268	65.4	69.0	1,227	351	638	519
	4 mos.	571	9,764	3,853	15,122	12,570	1,449	1,424	162	2,043	1,829	305	297	5,041	9,716	8,714	64.2	69.3	5,407	1,857	2,699	2,016
Georgia Railroad	April	323	721	24	819	827	145	129	9	129	126	26	32	341	685	654	83.6	79.0	135	40	110	142
	4 mos.	323	2,865	138	3,275	3,235	478	478	34	503	493	103	131	1,340	2,600	2,491	79.4	77.0	675	159	591	634
Georgia & Florida	April	360	309	....	313	268	92	84	4	36	31	7	18	90	249	226	79.8	84.4	63	18	22	11
	4 mos.	360	1,134	....	1,152	1,146	332	326	14	134	129	30	69	339	931	918	80.8	80.1	221	73	63	79
Grand Trunk Western	April	952	4,097	198	4,656	4,676	767	724	51	927	935	91	75	2,121	4,061	3,860	87.2	82.5	595	298	52	210
	4 mos.	952	16,850	828	19,134	19,754	2,675	2,395	200	3,486	3,518	364	296	8,640	15,783	15,264	82.5	77.3	3,351	1,162	1,195	2,473
Can. Natl. Lines in New Engl.	April	172	160	4	234	227	64	59	9	65	49	....	3	183	334	265	142.8	116.8	—100	24	—180	—114
	4 mos.	172	800	20	1,025	953	262	206	36	245	187	1	11	623	1,218	1,007	118.8	105.6	—193	94	—469	—319
Great Northern	April	8,314	17,195	1,060	19,854	21,008	3,688	3,296	279	3,924	3,562	630	417	7,092	15,926	15,328	80.2	73.0	3,928	1,640	2,036	3,444
	4 mos.	8,314	60,538	4,404	70,279	66,825	13,051	12,329	1,174	15,427	13,799	2,500	1,567	28,177	61,445	57,491	87.4	86.0	8,834	6,156	1,637	2,765
Green Bay & Western	April	224	294	....	309	336	74	90	5	44	27	14	22	86	242	237	78.6	70.6	66	35	28	48
	4 mos.	224	1,206	....	1,249	1,439	256	313	21	150	141	57	86	343	897	935	71.8	65.0	352	195	134	234
Gulf, Mobile & Ohio	April	2,766	6,522	358	7,371	7,183	1,213	1,230	66	1,333	1,212	233	254	2,116	5,268	5,216	71.5	72.6	2,103	1,010	813	768
	4 mos.	2,850	26,347	1,584	29,921	28,424	4,804	4,505	351	5,192	5,268	954	1,015	8,698	21,088	20,918	70.5	73.6	8,833	4,158	3,394	2,902
Illinois Central	April	6,539	19,726	1,731	24,007	23,934	4,067	3,853	358	4,377	4,121	730	481	8,831	18,800	18,433	78.3	77.0	5,208	2,976	1,813	1,922
	4 mos.	6,539	82,249	7,518	100,042	96,503	15,463	14,882	1,400	17,418	17,226	2,914	1,977	37,237	76,188	74,485	76.2	77.2	23,854	13,544	8,468	11,753
Illinois Terminal	April	447	809	76	992	1,006	150	150	26	151	157	35	44	402	802	809	80.9	80.5	190	107	70	81
	4 mos.	458	3,154	308	3,868	3,771	593	554	105	627	589	136	164	1,630	3,225	3,043	83.4	80.7	643	365	225	276
Kansas City Southern	April	891	3,610	128	4,074	3,756	475	405	34	506	476	80	93	1,123	2,315	2,165	56.8	57.6	1,758	852	683	654
	4 mos.	891	14,156	581	16,075	15,029	1,729	1,503	124	1,826	1,801	331	351	4,589	8,974	8,373	55.8	55.7	7,101	3,490	2,717	2,644
Kansas, Oklahoma & Gulf	April	327	563	1	570	616	109	64	6	47	38	9	27	129	338	275	59.4	44.6	231	115	81	133
	4 mos.	327	2,386	2	2,410	2,282	321	177	23	166	142	34	106	518	1,211	940	50.3	41.2	1,198	612	442	564
Lake Superior & Ishpeming	April	156	350	....	429	419	54	49	9	56	51	11	2	114	236	220	55.1	52.6	192	30	168	189
	4 mos.	156	537	....	631	635	180	168	37	249	202	44	8	256	735	684	116.6	107.7	—105	113	—184	—91
Lehigh & Hudson River	April	96	281	....	282	267	46	43	2	30	23	9	13	85	185	170	65.6	63.7	97	49	32	36
	4 mos.	96	1,095	....	1,097	1,084	166	153	9	119	100	34	52	345	725	660	66.1	60.9	372	154	148	166
Lehigh & New England	April	184	728	....	734	764	43	125	6	125	118	38	12	186	400	472	54.5	61.8	334	198	191	163
	4 mos.	184	2,477	....	2,499	2,625	263	366	25	511	457	147	47	725	1,688	1,734	67.6	66.1	811	519	520	515
Lehigh Valley	April	1,220	5,667	321	6,359	6,192	842	858	110	1,153	1,252	203	142	2,497	4,883	4,908	76.8	79.3	1,476	486	914	639
	4 mos.	1,220	23,746	1,355	26,545	24,720	3,071	3,082	422	4,338	4,661	810	568	10,154	19,133	19,387	72.1	78.4	7,412	3,327	3,944	2,874
Long Island	April	365	1,196	2,960	4,375	4,528	636	656	86	771	860	118	29	2,127	3,730	4,084	85.2	90.2	646	487	—69	—298
	4 mos.	365	4,390	11,256	16,664	16,037	2,527	2,384	343	3,107	3,341	471	65	10,045	16,422	15,597	98.5	97.3	243	1,943	—2,605	—2,567

Table continued on second left-hand page

FOR NEW EQUIPMENT·MAINTENANCE



TWO NEW *Schaefer* DROP-FORGED BRAKE DEVICES



TO SAVE YOU MONEY

Considerable savings in time and labor can be achieved through the use of Schaefer Arc-Weld Brake Rod Jaws and Eyes. They are ideal for application in all shops where arc welding equipment is available. The patented self-aligning feature on both the Jaw and the Eye makes both devices easy to apply.

By keeping a stock of Schaefer Arc-Weld Jaws and Eyes on hand, it is possible to apply them at the job, thus eliminating the time needed for a blacksmith to form an eye or apply a jaw to the rod. The time gained means quicker return of cars to service thereby assuring more effective use of rolling stock. In addition to repair programs, Schaefer Arc-Weld Jaws and Eyes are highly suitable for application on new equipment, especially where expensive flash welding equipment is not available.

Schaefer Arc-Weld Jaws and Eyes are so proportioned that their structure develops the full strength of the rod. They are drop-forged from high quality steel selected for good welding properties. Schaefer Arc-Weld Jaws are available for application to ¾", ⅞", 1" and 1⅛" rods. Arc-Weld Eyes can be supplied for three standard rod sizes in two styles, with ¾" pin holes for vertical hand brake rods and with 1⅛" pin holes for horizontal brake rod applications.

Schaefer **EQUIPMENT COMPANY**

KOPPERS BUILDING • PITTSBURGH 19, PA.

THIS PRACTICAL "
HELP CUT YOUR D

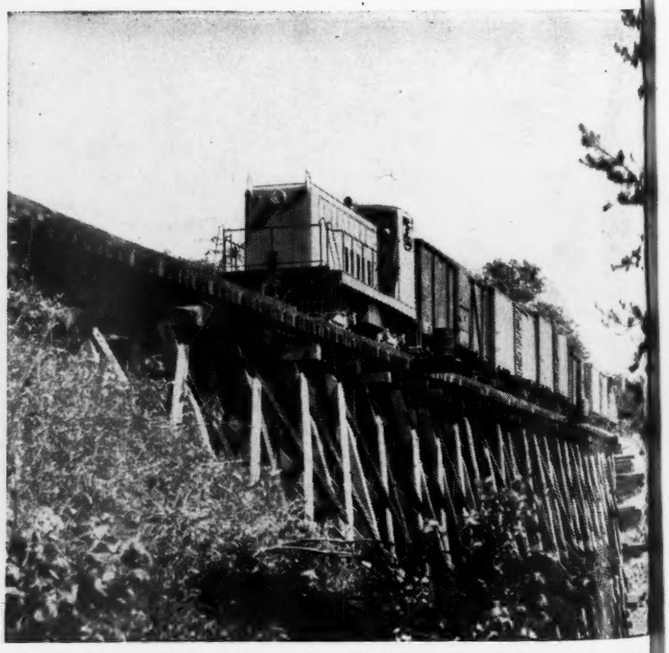
You get big savings when you substitute diesel-electric power for steam, but the way to get maximum savings is to ***tailor*** that power to the job. And that's where this "building block" principle can pay off on your road.

With "Big" power, you can do all the heaviest jobs. Yet for light car shifting or switching, it's a waste of power. Again, it's a prime reason for high costs in maintaining switches, rail, bridges and roadbed.

For a low initial investment, you can use G-E 44- and 70-ton diesel-electrics for highly economical switching, then couple them as "building blocks" to handle the tougher jobs. Through proper scheduling, you can take advantage of their high availability (averaging 97-100%), and avoid expensive standby time. Investment returns have been spectacular, with payments made from operating savings.

Investigate the savings possible by applying this realistic principle of railroad economics to your railroad. Your nearest G-E sales representative will be glad to help you determine the motive power best suited to your needs. ***General Electric Company, Schenectady 5, N. Y.*** 121-60

52,800 LBS. MAXIMUM TRACTIVE EFFORT at 30% adhesion is obtained by tandem operation of two G-E 44-tonners.



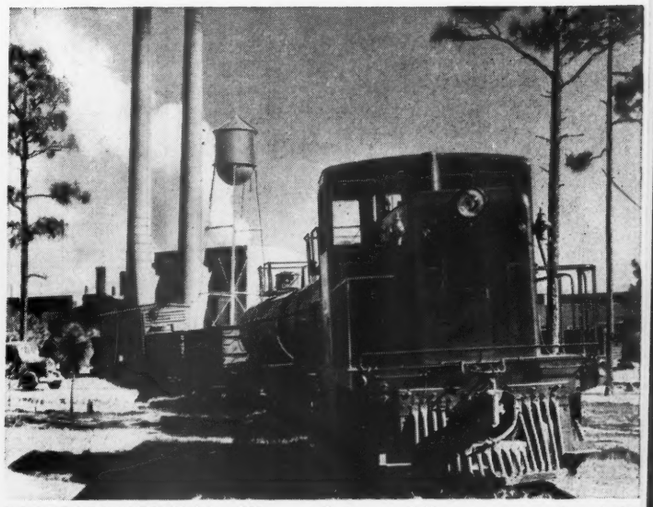
LOWER MAINTENANCE on light-duty track, bridges, roadbed is prime cost-cutting advantage of G-E 70-tonner.

"BUILDING BLOCK" PRINCIPLE CAN DIESEL-ELECTRIC LOCOMOTIVE COSTS

THERE'S NO POWER WASTED WHEN 44-TONNERS ARE TAILORED TO THE JOB, SCHEDULED TO UTILIZE HIGH AVAILABILITY

Use G-E Locomotives in Multiple for Longer Hauls, Singly for Switching

PERFORMANCE EQUAL TO "Big" power is available within capabilities of G-E 70-tonner at investment saving of $5,000 to $25,000 per unit.



RAILROADS REPORT big difference between daily average and periodic maximum loads, indicating need for flexibility of "building block" power.

GENERAL ELECTRIC

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1952

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1952	Total (inc. misc.) 1951	Operating Expenses: Maint. Way and Structures: Total 1952	Total 1951	Deprec. and Retirements	Maint. Equipment: Total 1952	Total 1951	Deprec. and Retirements	Traffic	Transportation	Total 1952	Total 1951	Operating ratio 1952	Operating ratio 1951	Net from railway operation	Railway tax accruals	Net railway operating income 1952	Net railway operating income 1951
Louisiana & Arkansas	April	756	2,029	55	2,167	1,951	366	397	19	265	233	68	71	588	1,364	1,285	62.9	65.9	803	361	377	229
	4 mos.	756	8,070	248	8,667	7,783	1,382	1,457	85	1,021	894	276	282	2,308	5,289	4,999	61.0	64.2	3,379	1,612	1,526	910
Louisville & Nashville	April	4,765	16,493	1,041	18,890	18,282	2,764	2,737	219	4,147	4,112	660	340	6,611	14,529	14,700	76.9	80.4	4,361	2,625	2,127	1,502
	4 mos.	4,765	67,508	4,666	77,473	73,548	10,879	10,202	883	16,011	15,167	2,580	1,343	27,108	58,010	57,476	74.9	78.1	19,463	12,047	9,463	6,993
Maine Central	April	981	1,999	104	2,256	2,147	387	390	26	387	373	65	22	740	1,609	1,595	71.3	74.3	647	352	253	225
	4 mos.	981	8,795	468	9,868	8,953	1,664	1,490	106	1,584	1,502	275	84	3,313	6,948	6,388	70.4	71.4	2,920	1,486	1,109	1,037
Midland Valley	April	334	182	....	185	195	56	42	6	25	21	3	5	70	164	134	88.4	68.7	22	15	—4	31
	4 mos.	334	643	....	654	718	206	154	25	82	64	10	20	247	582	483	89.1	67.3	71	67	—27	103
Minneapolis & St. Louis	April	1,406	1,512	4	1,571	1,778	342	337	23	287	294	71	118	543	1,395	1,422	88.8	80.0	176	133	53	82
	4 mos.	1,406	6,796	18	7,031	6,936	1,138	1,190	106	1,142	1,063	280	471	2,297	5,480	5,467	77.9	78.8	1,551	903	487	429
Minn., St. Paul & Sault Ste. Marie	April	3,224	2,844	55	3,085	3,365	733	555	56	726	637	96	79	1,313	2,970	2,734	96.3	81.2	115	222	—119	354
	4 mos.	3,224	10,505	269	11,483	11,168	2,498	2,151	191	2,971	2,586	382	311	5,326	11,585	10,653	100.9	95.4	—103	875	—1,014	—411
Mississippi Central	April	148	237	....	241	249	46	49	2	28	27	3	13	62	157	154	65.3	61.9	83	44	30	41
	4 mos.	148	875	....	890	859	176	168	9	106	110	13	52	248	622	596	69.9	69.4	268	131	94	99
Missouri-Illinois	April	172	438	....	441	409	72	54	4	68	64	20	8	116	270	239	61.2	58.3	171	109	69	66
	4 mos.	172	1,683	1	1,699	1,674	269	231	15	283	251	81	34	462	1,082	977	63.7	58.3	617	374	294	265
Missouri-Kansas-Texas Lines	April	3,242	5,899	334	6,853	6,512	1,030	949	110	1,097	915	233	263	2,454	5,173	4,885	75.5	75.0	1,680	752	652	592
	4 mos.	3,242	24,014	1,527	28,012	26,655	3,879	3,523	446	3,954	3,796	884	1,024	9,868	20,007	19,510	71.4	73.2	8,005	3,599	3,238	2,580
Missouri Pacific	April	6,950	16,637	885	19,542	19,028	3,596	3,103	285	3,845	3,891	701	438	7,151	15,665	15,507	80.2	81.5	3,877	1,273	2,131	1,655
	4 mos.	6,950	67,240	3,892	78,878	76,501	12,547	12,216	1,016	14,925	14,923	2,762	1,801	29,573	61,399	60,846	77.8	79.5	17,479	6,657	8,886	7,431
International Great Northern	April	1,104	2,815	176	3,258	3,249	675	705	32	587	573	100	57	1,259	2,704	2,748	83.0	84.6	555	126	259	207
	4 mos.	1,104	11,057	742	12,901	12,386	2,619	2,671	151	2,245	2,100	400	234	4,979	10,610	10,401	82.2	84.0	2,291	598	1,073	876
Gulf Coast Lines	April	1,727	3,508	82	3,821	3,588	787	770	41	541	575	95	86	1,194	2,748	2,752	71.9	76.7	1,073	467	426	357
	4 mos.	1,727	14,220	353	15,495	14,711	2,902	3,00[illegible]	185	2,145	2,264	375	354	4,817	10,785	11,061	69.6	75.1	4,710	2,173	1,741	1,440
Monongahela	April	178	671	....	673	834	92	88	11	76	79	8	1	256	435	442	64.6	53.0	239	19	77	222
	4 mos.	178	2,883	....	2,894	2,855	382	334	47	360	335	30	5	1,073	1,853	1,719	64.0	60.2	1,040	217	209	351
Montour	April	51	199	....	199	231	20	22	3	90	89	17	1	85	205	211	103.2	91.2	—6	36	36	39
	4 mos.	51	831	....	833	1 837	85	66	10	343	327	69	4	366	838	784	100.6	93.7	—5	155	156	132
Nashville, Chatt. & St. Louis	April	1,032	3,049	137	3,509	3,255	598	614	48	478	493	127	112	1,120	2,429	2,461	69.2	75.6	1,080	538	520	378
	4 mos.	1,032	11,586	620	13,482	12,624	2,179	2,007	186	1,941	1,827	492	452	4,546	9,598	9,291	71.2	73.6	3,884	1,956	1,870	1,581
New York Central	April	10,703	46,945	9,546	64,846	65,730	8,447	8,548	912	13,786	14,133	2,251	1,060	28,620	55,123	56,886	85.0	86.5	9,724	5,064	3,838	2,154
	4 mos.	10,714	191,899	39,835	264,354	259,178	33,477	34,296	3,646	57,310	56,380	8,816	4,277	122,310	230,466	231,939	87.2	89.5	33,888	20,546	8,884	—209
Pittsburgh & Lake Erie	April	221	3,640	72	3,905	4,149	485	528	42	1,181	1,157	241	72	1,417	3,385	3,381	86.7	81.5	520	463	722	832
	4 mos.	221	15,281	317	16,388	15,981	1,935	1,936	167	4,716	4,531	935	292	5,865	13,719	13,441	83.7	84.1	2,670	2,197	3,193	2,772
New York, Chicago & St. Louis	April	2,184	11,747	159	12,298	13,188	1,557	1,462	136	2,128	2,309	321	303	4,597	9,046	9,015	73.6	68.4	3,252	1,670	1,359	1,995
	4 mos.	2,187	50,874	747	53,196	51,881	6,540	5,934	586	8,858	8,638	1,283	1,224	18,465	36,872	35,969	69.3	69.3	16,324	8,275	7,021	7,025
New York, New Haven & Hartford	April	1,793	7,899	3,932	13,302	12,803	2,147	1,980	271	2,199	2,138	375	195	5,551	10,793	10,508	81.1	82.5	2,509	967	677	495
	4 mos.	1,793	31,201	16,569	53,856	50,755	8,191	7,375	1,086	8,478	8,325	1,483	767	23,039	43,375	41,359	80.5	81.5	10,481	4,246	3,059	2,255
New York Connecting	April	21	306	....	339	291	77	88	25	25	19	....	....	79	185	196	54.6	67.3	154	81	75	29
	4 mos.	21	1,320	....	1,435	1,099	283	320	100	126	58	....	....	324	744	651	51.8	59.2	691	333	403	261
New York, Ontario & Western	April	541	532	....	553	613	115	107	28	79	91	23	27	249	502	535	90.7	87.3	51	32	—37	—23
	4 mos.	541	2,138	....	2,220	2,386	417	387	93	332	343	92	103	1,038	2,012	2,067	90.7	86.6	207	140	—155	—94
New York, Susquehanna & Western	April	120	386	39	449	502	60	56	6	67	57	11	9	201	364	347	81.1	69.2	85	32	12	62
	4 mos.	120	1,584	155	1,833	1,845	224	207	23	251	208	45	36	795	1,416	1,323	77.3	71.7	417	127	162	204
Norfolk & Western	April	2,135	14,405	395	15,639	16,573	2,395	2,315	289	3,877	3,356	593	292	4,781	11,950	11,486	76.4	69.3	3,690	2,508	1,757	2,383
	4 mos.	2,135	62,824	1,676	68,126	63,544	9,246	8,866	1,191	15,577	13,427	2,326	1,172	20,756	49,160	45,435	72.2	71.5	18,966	13,288	8,819	8,858
Norfolk Southern	April	643	985	....	998	980	200	185	13	99	111	24	46	303	717	709	71.8	72.4	282	138	96	88
	4 mos.	643	3,880	....	3,949	3,677	775	661	52	476	447	91	184	1,223	2,953	2,759	74.8	75.0	995	491	323	286
Northern Pacific	April	6,887	12,068	572	13,776	14,421	2,468	1,981	285	2,894	2,726	477	323	5,231	11,611	10,956	84.3	76.0	2,164	1,239	1,289	1,952
	4 mos.	6,887	46,271	2,222	52,864	49,390	8,717	7,541	1,124	11,769	10,825	1,886	1,198	22,145	46,573	42,560	88.1	86.2	6,291	4,914	2,491	3,335
Northwestern Pacific	April	331	1,116	12	1,163	956	279	222	20	112	97	4	6	394	807	779	69.4	81.5	356	68	150	40
	4 mos.	331	3,637	28	3,790	3,463	1,139	923	75	406	386	16	21	1,544	3,174	2,988	83.7	86.3	616	222	—34	—12
Oklahoma City-Ada-Atoka	April	132	105	....	105	101	27	24	2	2	5	....	2	22	57	55	54.0	54.9	49	22	15	10
	4 mos.	132	394	....	397	384	92	81	9	22	20	....	8	88	226	210	57.0	54.6	171	78	50	46
Pennsylvania	April	10,120	62,934	13,001	84,778	85,635	12,590	10,651	1,389	17,912	22,417	2,600	1,313	37,114	72,386	74,453	85.4	86.9	12,392	5,717	5,104	4,067
	4 mos.	10,120	254,948	54,630	343,616	325,276	46,696	38,728	5,503	76,657	85,887	9,445	5,379	152,604	294,987	291,754	85.8	89.7	48,629	22,680	20,264	5,848
Pennsylvania-Reading Seashore Lines	April	364	635	126	787	773	220	204	25	90	96	15	12	543	901	932	114.5	120.6	—114	104	—342	—392
	4 mos.	364	2,415	471	3,000	2,838	860	932	101	371	369	62	41	2,153	3,562	3,681	118.7	129.7	—562	415	—1,445	—1,730

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1952

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1952	Total (inc. misc.) 1951	Operating Expenses: Maint. Way and Structures: Total 1952	Total 1951	Deprec. and Retirements	Maint. Equipment: Total 1952	Total 1951	Deprec. and Retirements	Traffic	Transportation	Total 1952	Total 1951	Operating ratio 1952	Operating ratio 1951	Net from railway operation	Railway tax accruals	Net railway operating income 1952	Net railway operating income 1951
Pittsburg & Shawmut	April	97	172	....	172	198	41	35	4	48	54	9	3	47	148	158	86.0	79.5	24	5	48	37
	4 mos.	97	708	....	710	804	115	97	22	227	228	35	14	200	591	595	83.2	74.0	119	23	202	155
Pittsburgh & West Virginia	April	132	727	....	734	725	142	140	23	183	184	33	51	190	592	599	80.7	82.7	142	84	98	108
	4 mos.	132	2,934	....	2,965	2,818	470	500	92	775	652	134	207	769	2,324	2,243	78.4	79.6	641	397	444	462
Reading	April	1,322	9,469	585	10,758	10,752	1,595	1,620	209	2,101	2,210	392	153	4,058	8,464	8,498	78.7	79.0	2,295	1,207	1,147	1,351
	4 mos.	1,322	39,869	2,324	45,166	42,175	6,287	5,577	859	8,821	8,521	1,551	608	17,563	34,847	33,248	77.2	78.8	10,319	5,421	5,074	4,424
Richmond, Fredericksburg & Potomac	April	118	1,575	621	2,544	2,337	350	313	24	288	288	66	21	711	1,525	1,514	59.9	64.8	1,020	516	372	284
	4 mos.	118	6,444	2,627	10,384	9,227	1,241	1,033	95	1,200	1,096	260	83	3,032	6,171	5,763	59.4	62.5	4,214	2,323	1,389	1,294
Rutland	April	397	358	15	447	481	83	91	10	86	83	13	20	224	443	476	99.2	99.0	4	23	—38	—49
	4 mos.	397	1,559	78	1,951	1,868	324	345	38	353	341	62	76	932	1,787	1,862	91.6	99.7	164	116	—22	—207
Sacramento Northern	April	271	174	....	182	266	58	56	4	12	17	4	2	78	159	181	87.2	68.2	23	14	—3	45
	4 mos.	271	889	....	914	1,062	242	224	17	51	73	16	9	327	667	688	72.9	64.8	247	58	115	236
St. Louis-San Francisco	April	4,601	8,546	545	9,931	9,722	1,804	1,717	184	1,757	1,737	483	298	3,632	8,005	8,048	80.6	82.8	1,926	984	999	793
	4 mos.	4,601	34,225	2,441	39,977	40,012	6,813	6,638	732	6,907	6,863	1,934	1,168	14,991	31,845	31,496	79.7	78.7	8,132	4,483	3,802	3,953
St. Louis, San Francisco & Texas	April	159	373	6	411	440	48	49	6	38	35	1	19	151	272	266	66.3	60.4	138	54	35	30
	4 mos.	159	1,614	27	1,754	1,587	192	187	15	143	140	4	79	625	1,091	1,023	62.2	64.4	663	178	280	132
St. Louis Southwestern Lines	April	1,569	5,832	26	6,145	5,732	924	777	81	606	723	96	162	1,602	3,483	3,583	56.7	62.5	2,662	1,515	938	678
	4 mos.	1,569	23,623	148	24,764	22,948	2,846	2,434	245	2,513	2,694	374	653	6,812	13,582	13,335	54.9	58.1	11,182	6,746	3,555	3,262
Seaboard Air Line	April	4,145	12,021	1,410	14,545	12,722	2,265	2,272	180	2,523	217	620	374	4,607	10,345	9,807	71.1	77.1	4,200	1,842	2,005	1,256
	4 mos.	4,145	47,517	6,536	58,619	53,038	9,060	9,125	683	9,569	8,803	2,068	1,479	18,813	41,282	39,376	70.4	74.2	17,337	7,843	7,951	5,754
Southern	April	6,306	18,587	1,561	21,926	21,756	3,023	3,064	204	4,326	3,987	748	444	7,284	15,998	15,944	72.9	73.3	5,928	3,301	2,182	2,256
	4 mos.	6,306	75,405	6,756	89,246	85,233	12,131	11,874	910	16,858	15,835	2,962	1,768	30,701	65,093	62,985	72.9	73.9	24,153	13,356	9,437	9,052
Alabama Great Southern	April	326	1,468	78	1,680	1,690	248	239	26	358	391	81	34	493	1,198	1,304	71.3	77.2	481	313	172	166
	4 mos.	326	5,625	365	6,547	6,322	934	898	72	1,463	1,543	324	137	2,139	4,929	5,068	75.3	80.2	1,618	1,066	555	526
Cinn., New Orleans & Texas Pacific	April	337	3,376	196	3,821	3,990	466	456	34	862	815	180	73	1,044	2,577	2,531	67.4	63.4	1,244	879	472	586
	4 mos.	337	13,157	943	14,966	14,535	1,809	1,792	130	3,311	3,103	686	278	4,103	10,049	9,597	67.1	66.0	4,917	3,328	1,928	2,098
Georgia Southern & Florida	April	397	665	101	839	732	151	169	8	71	67	10	8	254	507	503	60.4	68.8	332	134	75	51
	4 mos.	397	2,440	464	3,200	2,876	642	654	25	280	254	39	31	979	2,030	1,942	63.5	67.5	1,170	418	277	216
New Orleans & Northeastern	April	203	871	49	990	1,169	152	166	11	122	121	27	19	230	569	617	57.5	52.8	420	299	123	159
	4 mos.	203	3,358	225	3,852	4,303	641	662	57	489	473	109	78	994	2,386	2,388	61.9	55.5	1,466	1,009	434	618
Southern Pacific	April	8,118	37,448	4,197	44,970	41,940	5,003	4,731	447	9,166	8,162	1,530	844	16,073	33,079	31,709	73.6	75.6	11,892	6,269	4,779	3,855
	4 mos.	8,131	144,899	15,422	172,179	159,659	20,423	18,421	1,829	34,769	31,769	6,059	3,287	64,310	130,778	121,716	76.0	76.2	41,400	22,717	16,493	13,649
Texas & New Orleans	April	4,291	10,760	686	12,272	11,488	1,837	1,831	122	1,791	1,788	88	261	4,257	8,690	8,795	70.8	76.6	3,582	1,697	992	913
	4 mos.	4,291	43,952	2,906	50,190	46,044	7,337	7,401	495	7,130	7,047	352	1,039	17,181	34,886	34,679	69.5	75.6	15,304	7,255	4,501	3,677
Spokane International	April	152	194	1	205	237	59	55	2	20	16	8	5	61	156	144	75.9	60.7	49	13	24	67
	4 mos.	152	772	4	820	754	268	234	8	85	73	33	19	233	644	579	78.4	76.7	176	49	80	84
Spokane, Portland & Seattle	April	931	2,300	80	2,548	2,699	415	410	49	279	338	92	25	845	1,653	1,617	64.9	59.9	895	364	453	797
	4 mos.	931	8,797	345	9,734	8,897	1,497	1,439	181	1,245	1,159	360	110	3,118	6,328	5,877	65.0	66.0	3,406	1,256	1,855	2,011
Tennessee Central	April	286	398	....	423	401	109	81	7	67	65	21	12	137	347	313	82.1	78.1	76	26	28	39
	4 mos.	286	1,641	10	1,748	1,657	436	343	22	272	274	76	47	585	1,426	1,313	81.6	79.2	322	103	95	113
Texas & Northern	April	8	88	....	95	112	5	5	....	8	12	2	1	21	40	55	41.9	49.4	55	27	15	20
	4 mos.	8	373	....	412	434	24	37	....	35	40	10	4	87	169	219	41.0	50.5	243	123	76	86
Texas & Pacific	April	1,834	5,807	359	6,716	6,353	988	905	85	1,039	959	248	180	2,063	4,593	4,396	68.4	69.2	2,123	837	978	693
	4 mos.	1,834	23,019	1,535	26,716	24,980	3,853	3,395	486	4,482	3,727	1,008	720	8,492	18,835	17,280	70.5	69.2	7,881	3,608	3,035	2,759
Texas Mexican	April	162	298	....	313	308	63	71	5	36	35	8	8	58	187	196	59.5	63.6	127	57	50	42
	4 mos.	162	1,043	....	1,118	1,122	303	263	23	117	123	33	34	228	761	735	68.1	65.5	357	158	127	151
Toledo, Peoria & Western	April	239	542	....	547	533	77	114	5	46	40	9	43	123	325	332	59.4	62.3	222	108	78	56
	4 mos.	239	2,275	....	2,305	2,405	335	322	24	180	149	36	175	528	1,353	1,309	58.7	54.4	952	452	345	321
Union Pacific	April	9,867	31,597	2,870	38,016	41,440	7,817	6,513	453	7,419	7,703	1,159	996	13,428	32,073	32,044	84.4	77.3	5,943	4,488	594	2,047
	4 mos.	9,867	131,786	12,439	157,210	156,138	22,675	19,724	1,667	30,408	29,998	4,646	3,813	58,072	123,806	117,753	78.8	75.4	33,403	23,038	6,761	9,561
Utah	April	110	89	....	90	52	24	21	2	51	47	7	1	43	127	112	142.2	214.6	—38	11	—34	—62
	4 mos.	110	607	....	607	343	87	69	8	212	203	23	4	299	632	494	104.1	144.2	—25	46	—52	—164
Virginian	April	611	3,279	2	3,394	3,764	506	437	59	867	800	173	50	827	2,349	2,174	69.2	57.7	1,046	671	515	728
	4 mos.	611	15,833	7	16,468	14,396	2,038	1,583	234	3,787	3,038	687	187	3,839	10,226	8,316	62.1	57.8	6,241	3,496	3,205	2,903
Wabash	April	2,393	8,176	361	9,289	9,534	1,394	1,293	118	1,282	1,201	351	286	3,825	7,165	6,954	77.1	72.9	2,125	909	804	897
	4 mos.	2,393	33,290	1,609	37,722	37,611	4,731	4,481	436	5,112	4,816	1,346	1,142	15,503	27,908	27,065	74.0	72.0	9,814	4,326	3,819	3,716
Ann Arbor	April	294	644	....	651	737	98	87	16	113	113	30	26	305	562	558	86.4	75.6	88	36	36	68
	4 mos.	294	2,915	....	2,941	3,057	372	313	66	463	430	119	104	1,280	2,295	2,181	78.0	71.3	646	298	284	351
Western Maryland	April	836	3,722	8	3,921	3,965	548	582	43	966	818	173	84	1,268	3,069	2,859	78.3	72.1	852	521	513	646
	4 mos.	836	16,253	35	17,211	16,458	2,039	2,169	180	3,640	3,188	694	336	5,425	12,140	11,432	70.5	69.5	5,070	2,850	2,916	2,888
Western Pacific	April	1,193	3,756	249	4,111	4,737	634	645	78	677	632	119	174	1,257	2,986	2,958	72.6	62.4	1,124	648	450	825
	4 mos.	1,193	15,197	897	16,463	17,858	2,694	2,281	279	2,688	2,583	495	762	5,333	12,388	11,393	75.3	63.8	4,074	2,326	1,487	3,117
Wisconsin Central	April	1,046	2,298	36	2,479	2,700	371	391	43	470	409	65	76	1,041	2,061	2,020	83.1	74.8	418	151	133	316
	4 mos.	1,046	9,395	145	10,133	9,570	1,360	1,234	153	1,926	1,952	257	292	4,366	8,361	8,132	82.5	85.0	1,773	610	526	44

ANNOUNCING

THE IMPROVED

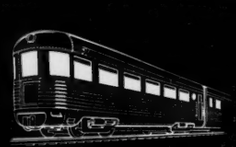
Exide-Ironclad

BATTERY

YEAR AFTER YEAR, one Exide-Ironclad improvement has followed another. It is a record of continuing progress . . . a steady flow of storage battery developments that have made Exide-Ironclad YOUR BEST POWER BUY AT ANY PRICE.

NOW COMES ANOTHER Exide-Ironclad advance . . . . . a polyethylene insulating tube sealer. This and other improvements combine to give you more dependable battery performance and longer-than-ever battery life.

Exide-Ironclad BATTERIES
YOUR BEST POWER BUY →
. . . AT ANY PRICE



BUILT TO GIVE YOU...

FOR DIESEL STARTING—Quick breakaway, high power reserve and high availability.

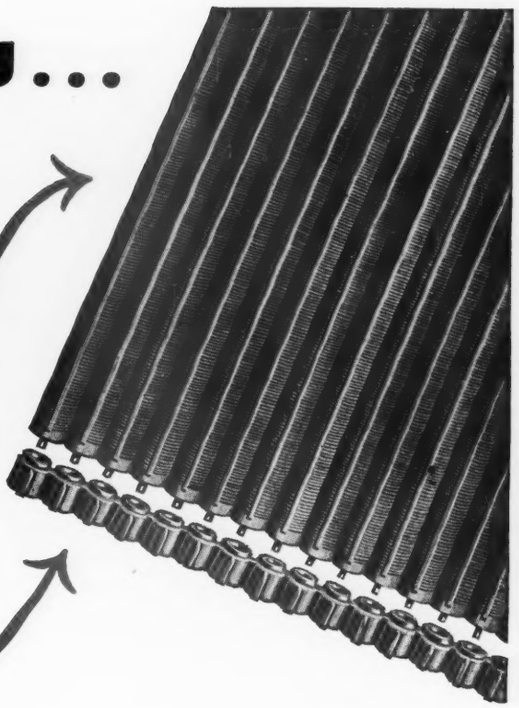
FOR CAR-LIGHTING and AIR-CONDITIONING—Ample power, steady lights and cool cars, uninterrupted service.

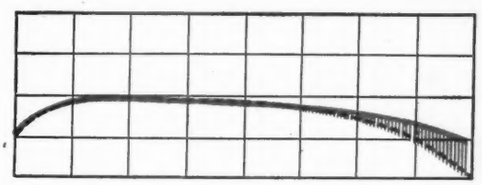
FOR BATTERY-ELECTRIC TRUCKS—High maneuverability, rapid, accurate and safe handling, high availability, low operating cost.

BECAUSE OF:

IMPROVED POSITIVE PLATE CONSTRUCTION
the long-life grids now contain SILVIUM —an alloy of silver, lead and other components—which make them highly corrosion resistant. Top conducting bar is heavier.

...with the New Polyethylene insulating tube sealer
An insulating sealer for the bottom of the tubes. Acid-proof, non-corroding plastic it fits snugly into slotted tubes of positive plate, and reduces loss of active material. Even the small sediment deposit of the past is reduced 50%. Thus, more active material remains available, and the high battery capacity is sustained for longer working life. (See chart at right.)





PERMANIZED NEGATIVE PLATES
Improved processing, a result of Exide Quality Control assures uniform plates with higher electrical efficiency. These negatives, teamed with the improved positive plates, give you a well-balanced combination for hard service and long life.

NEW SEALING COMPOUND
Through the cooperative efforts of Exide Laboratories and the Franklin Institute, a new homogeneous compound was developed. It makes a permanent seal between the jar and cover, resisting shock without cracking in high or low temperatures.

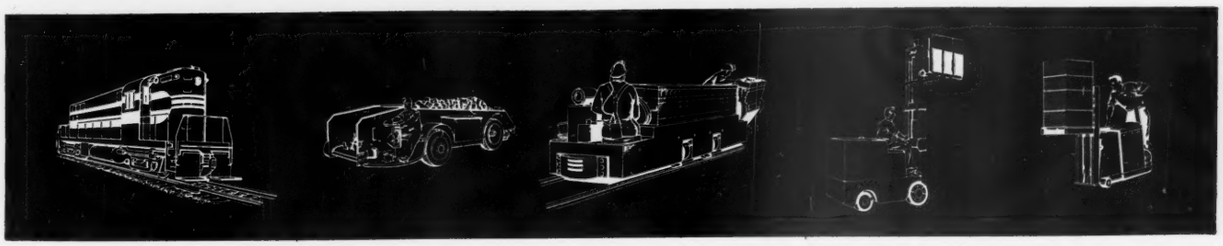
SEAMLESS SHOCK-PROOF JAR
Made of high quality rubber. A scientifically selected combination of tensile strength and elongation provides a sturdy jar built for long life and heavy-duty service.

CORROSION-RESISTANT TRAY GUARD
A plastic acid-resistant steel tray coating with high insulating quality and ability to withstand hard knocks.

NEW UNBREAKABLE PLASTIC VENT PLUGS
Made of unbreakable polyethylene. Can be quickly and easily removed to add water.

Types and sizes for storage battery applications for every heavy-duty service.

Write today for further information.



THE ELECTRIC STORAGE BATTERY COMPANY

Philadelphia 2

Exide Batteries of Canada, Limited, Toronto

"EXIDE-IRONCLAD" "SILVIUM" and "PERMANIZED" *Reg. Trade-marks U.S. Pat Off*

A Year's Review of Improvements in

Motive Power and Rolling Stock Products

Cast Steel Snow Plow

A snow plow for application to either switching or road service diesel-electric locomotives has been marketed by the General Steel Castings Corporation, Granite City, Ill.

These plows are one-piece steel castings designed so the snow is removed from rails without causing interference with traction motors or obstructing cab steps. Provision is made for adjustment to desired height above the rail. The units are easily applied, removed and reapplied for seasonal use. They may be applied at either or both ends of the diesel. When locomotives are coupled together, there is sufficient clearance for negotiating 130-deg. curves.

Freight-Car Paint Process

A hot-spray freight-car enamel has been developed by the Sherwin-Williams Company in conjunction with the Pullman-Standard Car Manufacturing Company, Chicago. The process utilizes heat instead of thinners as a viscosity reducing medium.

In its application, a conventional primer is used prior to applying the enamel. This enamel is a synthetic finish which contains a smaller volume of thinners than is employed in conventional freight car paint. Because of its higher solids content, one coat of the hot finish is applied instead of two coats of conventional paint.

Commercial equipment for heating the enamel, and the primer if that is to be applied hot, is available from heater manufacturers. Conventional type spray guns are used.

Air Foam Fire Extinguisher

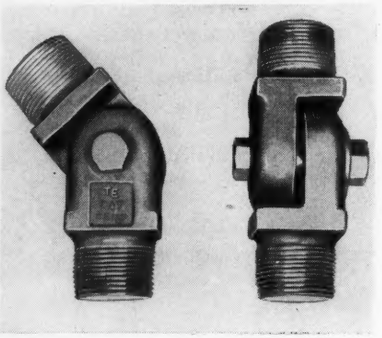
A new fire extinguisher system for locations without adequate water pressure or a water supply has been perfected by the Pyrene Manufacturing Company, Newark, N. J. Utilizing air foam, it operates independent of any continuous source of supply.

Operation is started by pulling a handle in the manual control pull box which releases gas from a carbon dioxide pressure cylinder within a water tank. Discharging water passes through a foam compound into the water stream. The unit occupies 24½ by 24½ by 70 in. and when fully charged weighs approximately 1,600 lb. The 100 gal. of water and 6 gal. of foam compound will produce 1,750 gal. of foam at the rate of 350 gal. per min.

Ore Car Strip Heaters

Strip heaters under the floor of bottom dump ore-transfer cars are now providing a means of keeping ore from freezing and sticking to interiors during winter months.

These General Electric Company heaters are clamped directly to the hopper plates of cars designed by the Atlas Car & Manufacturing Co., Cleveland. They are controlled so as to allow for contraction and expansion and are easy to replace. To facilitate maintenance each group of heaters is connected to a fused safety switch at the control panel.



Adjustable Angle Fitting

An adjustable angle fitting which permits vertical suspension of overhead electrical equipment from sloping or arched roof members is now in production at the plant of the Thompson Electric Company, Cleveland.

The fitting is fabricated of aluminum alloy with conical seats for double cone plugs which join the halves. It is avail-

able in three types. The light-duty model is designed for units weighing under 60 lb.; the medium size handles loads from 60 to 100 lb.; and the heavy-duty model is capable of suspending equipment weighing up to 1,500 lb.

Protective Coating

An air drying coating to protect tanks, tank cars, pipes, fittings, etc., against spray, drip or splash from corrosive chemicals, weathering and rust, is known as U. S. Royalguard. It was introduced by the United States Rubber Company, New York. The manufacturer states that it will not chip or crack and can be used on steel, aluminum, concrete, hardwood or composition board. The product is applied by spray, allowing one hour drying time between applications.

Indicating Pyrometer

An indicating, contact-making pyrometer, available either as a single circuit instrument or with a motor-driven selector switch, is being marketed by the Illinois Testing Laboratories, Chicago.

Known as the Alnor Pyrotec, the device is designed to improve the instrumentation of a diesel or gas engine. It may be used to sound an alarm and automatically shut down the engine in case of excessively high exhaust gas temperature for any one cylinder. In a multiple engine plant, the Pyrotec can be connected to a coupler in the common exhaust of each engine and will sound an alarm if one engine is overloaded.

Mechanical Seal

A high temperature seal, designated as the Type 9 Mechanical Shaft Seal, and incorporating a flexible plastic ring, has been developed by the Crane Packing Company, Chicago 13.

The seal can be employed under severe corrosive conditions and at temperatures up to 500 deg. F. It is designed for service on various rotating shaft applications such as centrifugal pumps, turbines and agitators.

Fueling Alarm Signal

A signal to provide attendants with a positive guide when fueling diesel locomotives has been announced by the Scully Signal Company, Cambridge 41, Mass. Called the Ventalarm, it audibly indicates the start of the fill by the venting vapors, forced out of the tank by the incoming liquid, blowing a whistle incorporated into the signal assembly. When the whistle stops, the attendant knows that the tank is full.

The unit eliminates wasteful overflow during fueling and permits faster servicing. The whistle in the alarm operates at a pressure of 0.5 oz. per sq. in.

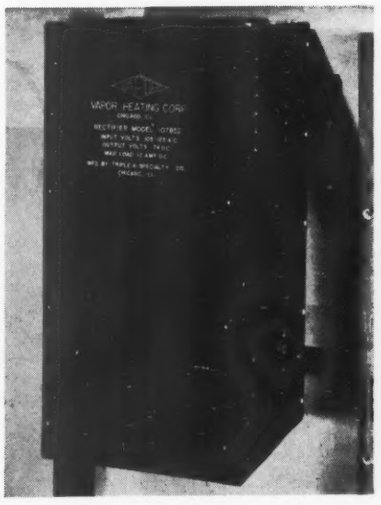
Door Opener and Closer

Recently marketed for installation on freight box car doors, the E-Z-Way mechanical door opener and closer is manufatured by the Penco Engineering Company, San Francisco, Cal. It can be inserted and pressure applied up to 4,000 lb. at any height in the car doorway.

This 34 lb. unit consists of a short bar which fits into a ratchet housing. When swung back and forth, it slides the door open or closes it. The device will not jerk car doors off runners.

Diesel Liner Lubrication

Lube-Lok, a bonded-to-metal lubrication process, has been developed by the Electrofilm Corporation, North Hollywood, Cal. The system is now being applied to diesel liners. Life of the processed liners was increased approximately 85,000 miles beyond normal service according to tests conducted on one road.



Locomotive Battery Charger

A selenium rectifier has been designed to convert 110- and 220-volt a.c. to 74-volt a.c. to operate Vapor hot water heaters on freight and switcher diesel locomotives and passenger cars during standby periods.

Introduced by the Vapor Heating Corporation, Chicago, in cooperation with the Triple A Specialty Company, Chicago, the rectifier supplies 12 amperes for sustained periods and maintains a trickle-charge current to storage batteries. This charge rate is controlled by a standard type incandescent lamp.

Dimensions are 10 in. x 10 in. x 10 in.

(Continued on page 43)

Best Buy

...Here's Why!

Aeroquip Detachable, Reusable Fittings reduce hose line inventory. For on-the-spot replacements cut bulk hose to required length and attach fittings.

Unique Fitting design provides quick, easy assembly and assures positive grip on hose. No adjusting is required after assembly.

Hose is constructed of seamless synthetic rubber compound reinforced with two cotton braids and a high tensile steel wire braid.

Wide range of male and female end fittings in all sizes meet practically every requirement. Fittings are designed to SAE and JIC specifications.

Tough, durable Aeroquip Hose Lines are fire resistant. They perform satisfactorily at extreme temperatures—from —40° to +275° F.

Aeroquip Hose Lines are widely used with hydraulic fluids, lubricants, water, gasoline, Diesel fuel, air, and many other fluids.

Always first

AEROQUIP FLEXIBLE HOSE LINES OUTSELL ALL OTHERS FOR INDUSTRIAL AND AIRCRAFT APPLICATIONS

Aeroquip

REG. TRADE MARK

AEROQUIP CORPORATION, JACKSON, MICHIGAN

SALES OFFICES: BURBANK, CALIF. • DAYTON, OHIO • HAGERSTOWN, MD. • HIGH POINT, N. C. • MIAMI SPRINGS, FLA. MINNEAPOLIS, MINN. • PORTLAND, ORE. • WICHITA, KAN. • TORONTO, CANADA

AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD

Flow Line Indicator

A visual flow line indicator, the Liquid Eye, permits instant inspection without reading pressure gages when incorporated into the line. The indicator, made by the Allin Manufacturing Company, Chicago 22, consists of a brass housing in which is inserted a transparent Pyrex tube with a ceramic eye.

The devices can be used in boiler feedwater conditioner lines, oil pressure, diesel fuel, refrigerant and other chemical lines, where a positive check of flow is required. Three styles are available in copper tube sizes of ¼, ⅜, ½ and ⅝ in. with male flare ends, female to male flare ends, or with solder connections.

Split Thrust Washers

Sabeco split washers now available from the Saginaw-Bearing Company, Saginaw, Mich., have been introduced to facilitate repair of bearings. When installing new bearings, it is not necessary to dismantle a machine. The split washers are slipped over the shaft and locked with the safety key.

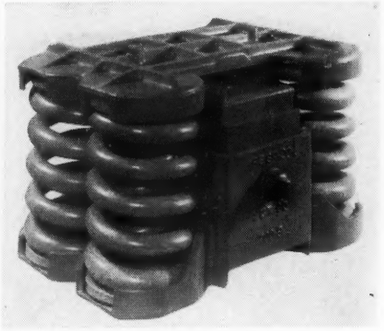
These washers are suitable for heavy machinery, plant and railway equipment, or on any job using thrust washers. The replacement washers are made of bronze with a maximum of 0.2 per cent impurities.

Engine Warning System

Tellite, a remote indicating engine warning system, has been developed to protect engines against high water temperatures, high lubricating oil temperatures, low oil pressure, etc. The unit gives three indications—light off, dim light and flashed light—and warns the operator of any malfunction which might result in damage to engine parts.

A dim, visible light glows when all connected units are operating normally. A temperature rise, or low oil or air pressure causes the system to flash the warning: bright-dim, bright-dim.

Any number of pressure and temperature control switches may be used in this warning circuit. By this method, developed by the Rochester Manufacturing Company, Rochester, N. Y., one warning light may be used for checking a large number of points throughout an engine.



Spring and Stabilizer

A package-group spring and stabilizer unit for old-type A.A.R. trucks of existing freight cars is now on the market. Developed by the Standard Car Truck Company, Chicago, it uses the increasing downward friction principle of Barber stabilized trucks and is adaptable to spring-plank and spring-plankless trucks of all 40- and 50-ton types.

The housing and top plate are malleable iron. Hardened wear plates are secured to the housing by bolts, nuts and lock washers. Its alloy friction shoes are cup-shaped partially to enclose the actuating alloy springs. They are forced against the wear plates by wedges.

Mica Insulation

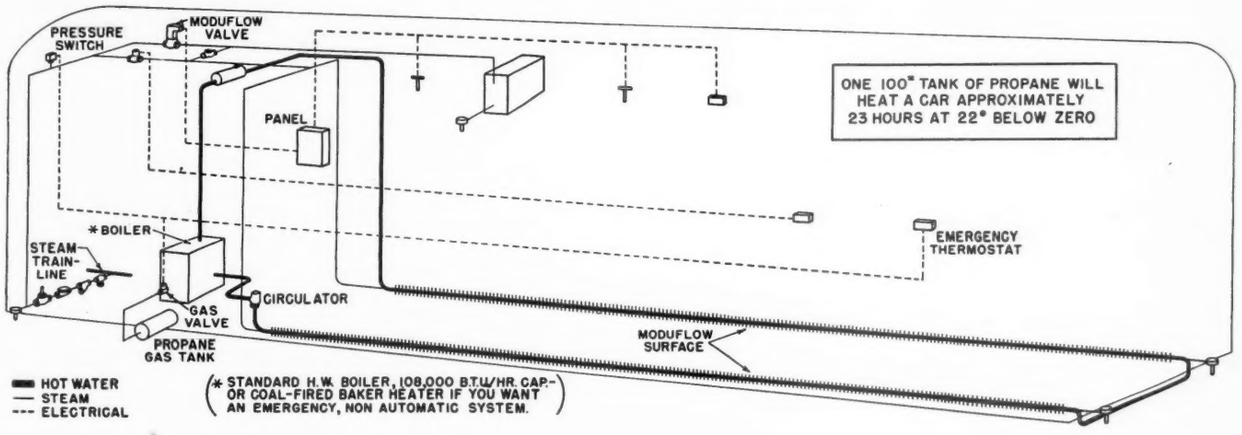
Mica mat, made of matted flakes of mica, is now being used both in armature windings and field coils in the manufacture of some motors and generators for electric and diesel-electric locomotives built by General Electric Company's Locomotive and Car Equipment Department, Erie, Pa.

This material will stand about 600 volts per mil of thickness and thickness is more constant than was possible with mica-glass cloth insulation. The product is made by baking the mica at 700-800 deg. C. and quenching with cold water. This slurry is fed to a paper making machine and comes out dry. It is then impregnated with a silicone varnish. The finished product meets specifications of Class H insulation.

Blind Rivet

With the introduction of the Pax Speedy Rivet by the Rail-Air Equipment Company, Los Angeles 29, no special tools or processes are necessary on blind riveting operations. Two operations are required for insertion: insert the rivet and drive the pin with an ordinary mechanic's hammer. The device can be used for fastening all types of framing, channel section, angular, or tubular.

(Continued on page 46)

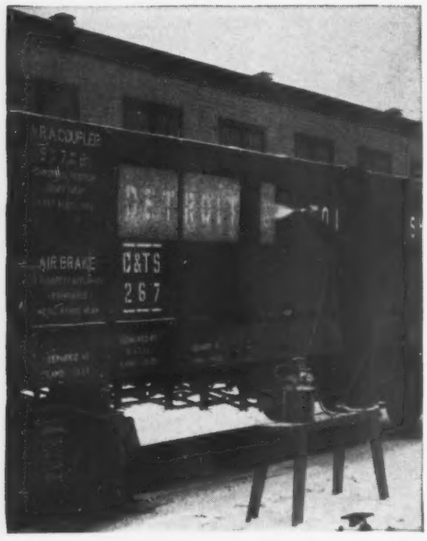


Passenger Car Heating Unit

A system for heating passenger cars when the locomotive runs out of water or when batteries fail has been introduced by the Minneapolis-Honeywell Regulator Company, Minneapolis, Minn.

The device consists of a propane gas-fired hot water boiler, controlled by a valve and thermostat, powered by the pilot flame. No steam or electric energy are needed. This equipment may be adapted to cars now in service.

1 Channels, recesses, latticework on bridges are coated thoroughly, evenly, faster when you use DeVilbiss spray outfits.



2 The speed of spray painting makes it most efficient for maintaining signals and equipment, for stenciling letters or safety markings. And spray stenciling can be done by any painter.

HOW DEVILBISS HELPS YOU SAVE TIME, LOWER COSTS, IMPROVE PAINTING METHODS

DeVilbiss is the complete source for RR and maintenance spray equipment, service, and training

From portable painting outfits of all types to large, custom-built DeVilbiss Traveling Spray Booths, DeVilbiss is your most reliable supplier of dependable spray equipment.

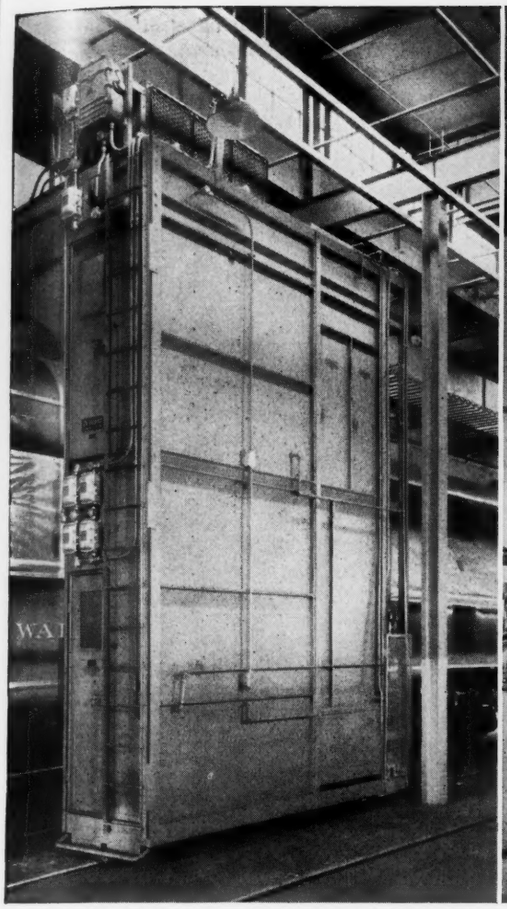
From training school to new, exclusive Rebuilt Exchange Service, DeVilbiss can help you *best.*

These pictures and captions suggest the diversity that makes DeVilbiss the leader in spray equipment. For help on any spray problem, or for complete information on the *free* DeVilbiss Training School, contact our nearest office or write the factory.

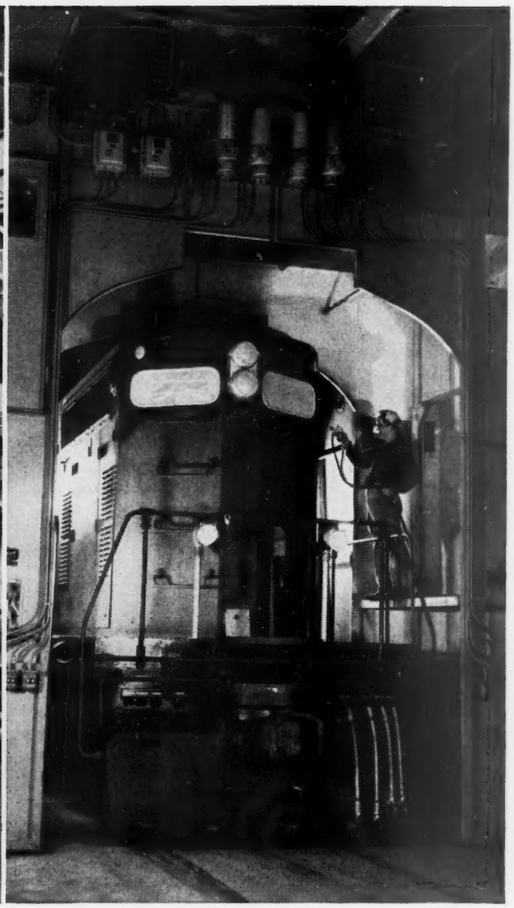
THE DEVILBISS COMPANY, Toledo, Ohio

Windsor, Ontario • London, England • Santa Clara, Calif.

Branch Offices in principal cities

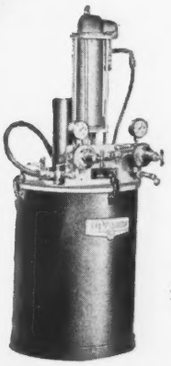


3 DeVilbiss Traveling Spray Booth brings painters to the work! No need to build scaffolds, or to be constantly moving painting equipment, with this easy, cost-saving method.



4 Electrically operated platforms in DeVilbiss Traveling Spray Booth permit operators to spray top, sides and length of object without moving from their spray stations.

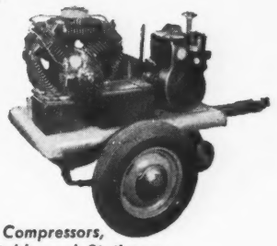
Spray Guns



Material Tanks and Pumps

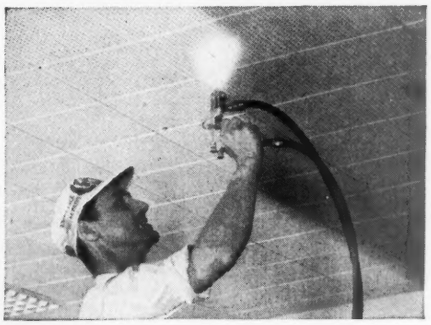
Hose and Connections

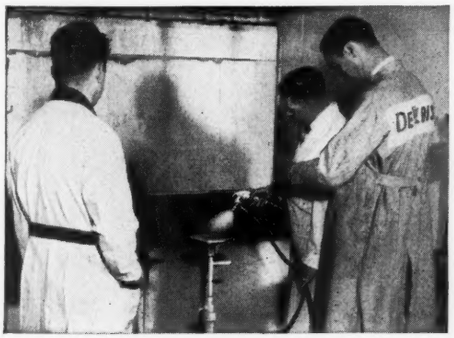
Spray Booths



Air Compressors, Portable and Stationary

5 Spraying saves one-fourth the time . . . up to 50% in over-all painting costs. On many surfaces, like acoustical tile, it is the only practical method.

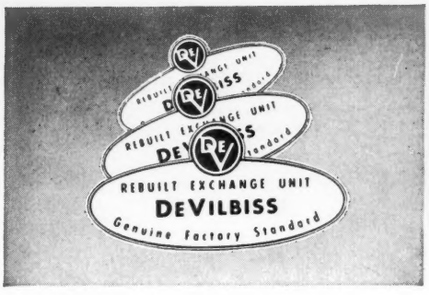




6 Free of charge, DeVilbiss will train your painters in all phases of RR painting at our special school. And your unusual spray problems will get scientific attention at our Customer Research Laboratory!

For air compressors; booths; guns for every job; hose and connections — investigate DeVilbiss soon! And ask how your painters can attend our school.

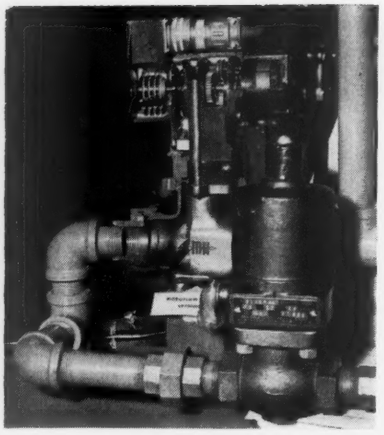
7 New DeVilbiss exclusive! *Rebuilt Exchange Service* saves you delay and money by replacing worn-out equipment at nominal charge with guaranteed factory-rebuilt units.



FOR BETTER SERVICE, BUY

DEVILBISS

Finned tubing used for floor heat. Small tube carries modulated flow of steam.



Cutaway moduflow valve and standby valve, basic element of electronically controlled heating system.

Car Heating System

An electronically controlled heating system for sleeping cars has been introduced by the Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. It combines overhead and floor control heat units and electronic thermostats control a single steam valve for the car's entire heating and cooling system.

For individual car-room temperature control, a booster system was developed. By adjusting a pneumatic switch, the passenger can regulate control of hot water and thus have direct control of air temperature. Cooling in summer is controlled by end switches, operating on the valve's overtravel movement, which turn on the cooling after the steam shuts off.

Heavy Lubricant Dispenser

A portable, battery powered dispenser for tar-like lubricants used in diesel-electric locomotive gear cases has been designed by the Brown Dynalube Manufacturing Company, Charlotte, N. C.

Named Dynalubricator GHM-3, it has a capacity of 150 lb. of lubricant. Two 220-volt, 1,000-watt immersion type heating units are used to warm the lubricant to a working temperature of 160 to 170 deg. F. before it is pumped into the gear cases. A built-in metering gage measures the lubricant pumped in each operation so that any amount up to 12 lb. can be dispensed to the case. The unit's lubricant hose is 15 ft. long and is fitted with a drip-proof nozzle.

Engine Starting Fluid

Cold weather starting of off-rail equipment, has, according to the California Oil Company, Barber, N. J., been made easy with the introduction of Chevron Starting Fluid. This product has been nicknamed "vitamin pills for engines" by the manufacturer.

Fixed amounts of the fluid are encased in gelatine capsules. These capsules work with a priming system permanently connected to the intake manifold of an engine. The operator places a capsule in the primer, punctures it by pressing down the plunger and primes the engine before touching the starter.

The system is adaptable to all sizes and types of internal combustion engines.

Diesel Engine Protector

The P-M Engine Protector is a device to help prevent excessive damage to engines caused by failure of internal parts. It operates on a diaphragm principle and was developed by the Paxton-Mitchell Company, Omaha 5, Neb.

When pressure builds up in the crankcase, the diaphragm operates a relay which in turn operates a stop relay in the control circuit and automatically shuts down the engine. The unit can be used on all types of diesel engines. It is sealed, eliminating the possibility of damage from water or cleaning solution.

Chemical Cleaning Compound

A cleaning compound, No. 751 Cleaner, has been introduced by the Magnus Chemical Company, Garwood, N. J. It is designed for removing carbonaceous deposits from tubes of fuel oil heaters without dismantling the equipment.

To clean the exchanger, it is recommended that a solution of one part cleaner and two parts water be heated to 140 deg. F. and pumped through the tubes where the deposits are exposed to the compound. The solution should be circulated for 8 hours, then discarded. A fresh solution is then pumped through for 10 hours in the reverse direction.

Waterproof Liner

A waterproof lining to prevent sharp objects from tearing sacked products, to insulate against contamination, and make box cars grain tight has been developed by the J. J. Lipp Paper Company, Chicago, Ill. This paper consists of two sheets of Kraft paper cemented together with asphaltum. It is reinforced with rayon tapes and is creped after lamination. Two men can finish an entire car floor in 15 minutes.

Terminal Block

A terminal block fitted with Williams grip connectors has been introduced for reducing the time required for change-out of traction motors on diesel units. A quarter turn of the buttress thread nuts is all that is needed to tighten cable connections.

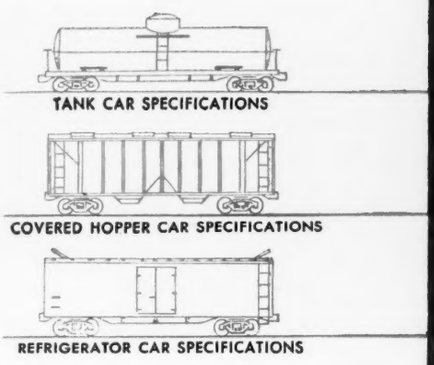
The block, made by the Paxton-Mitchell Company, Omaha, Neb., is fabricated of neoprene. Terminal connections are made of alloy copper. These connectors provide a tensile pull of 1,500 lb.

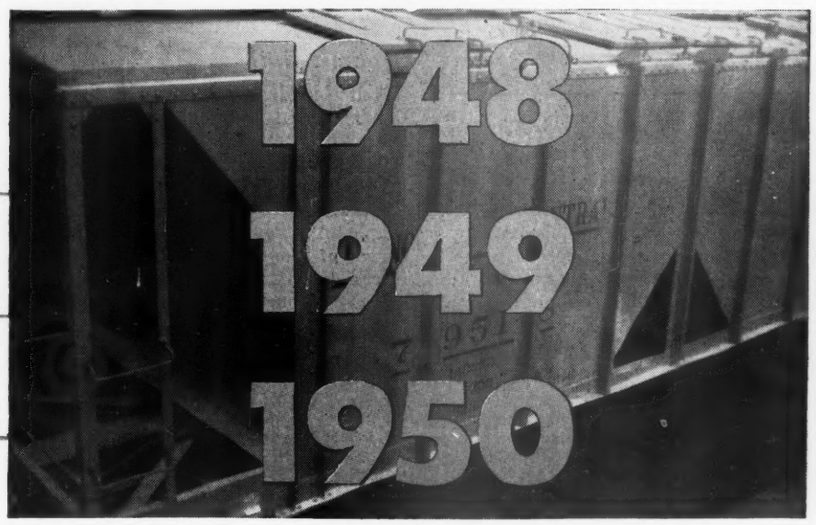
Locking Hatch Cover

An automatic locking hatch cover for covered hopper cars has been announced by the Youngstown Steel Door Company, Cleveland. Its design positions the shaft and operating lever of each mechanism near the running board of the car.

The hatch frames carry the entire operating mechanism. On single units, embodying one cover, one frame, and

Covered hopper car finished with CARCLAD in September 1946. Inspections made in September 1951, after 5 full years of service, still show finish intact.





NOW...

protection against acids... alkalies... corrosive cargoes...

for YEARS instead of MONTHS!

Now proved in continuous service for periods of more than FOUR years on covered hopper cars, Sherwin-Williams CARCLAD offers an end to costly refinishing schedules formerly required.

Equipment once requiring refinishing within months now can be protected for years—even in cement, soda ash and similar service. CARCLAD—a product of Sherwin-Williams research—provides new long-life resistance to acids, alkalies, sulphur, phosphate, common salt, petroleum products and alcohols. It withstands repeated scrubbing and washing with strong cleaning solutions.

Ask for proof of the remarkable performance of this new finish. See actual photographs and records of CARCLAD-covered hopper cars in service on leading railroads! Contact your Sherwin-Williams representative or write The Sherwin-Williams Co., Transportation Division, Cleveland 1, Ohio.

SHERWIN-WILLIAMS
RAILWAY FINISHES

COVER THE EARTH ®

one locking mechanism, the unit is ready for service as soon as the frame is secured to the roof. To open the covers, the lever is moved upward toward the running board and is automatically locked by a swinging latch. It is impossible to damage the covers or locking mechanism by improper operation.

Carbon Dioxide Weighing Unit

A weighing device to insure correct weight of charge in the cylinder when activating carbon dioxide fire-fighting equipment has been engineered by the American-La France-Foamite Corporation, Elmira, N. Y. Requiring only minimum effort, there is no need to take the system out of service. The device weighs only 28 lb. It is constructed of channel iron and its scale has a capacity for weighing up to 200 lb.

Dynamic Grill

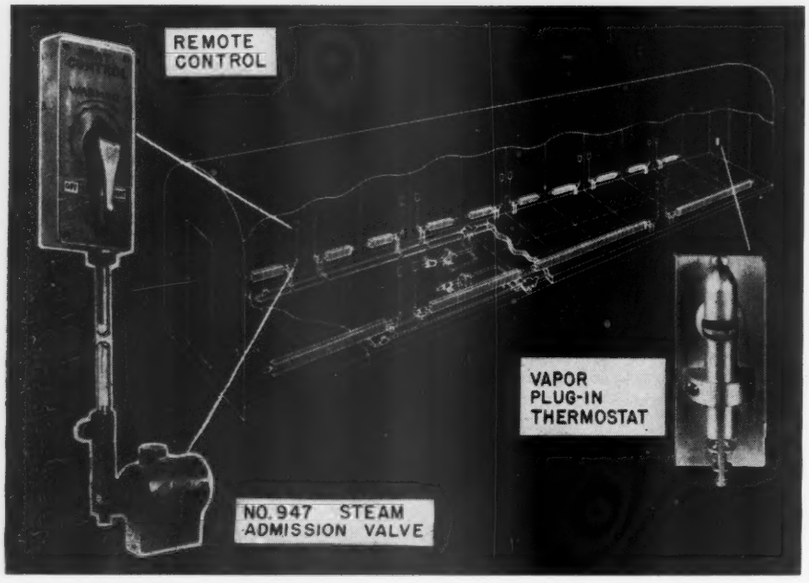
A device designated as the Far-Air Dynamic grill has been introduced to baffle snow and dirt from air filters of diesel locomotives.

Operation of the grill, introduced by the Farr Company, Los Angeles, is simple. Air flowing past the grill, because of the locomotive's speed, is forced to change direction. The net velocity through the grill openings in front of the filters at full air requirements is approximately 1,000 ft. per min. Particles such as snow in the outside stream are forced to make a 90 deg. bend in order to enter. Most such particles do not turn this sharply and are baffled out into the outside air stream.

Battery Water Unit

A refillable ion-exchange unit for delivering soft water when attached to an ordinary faucet has been developed by the La Motte Chemical Products Company, Baltimore. Designed for small-quantity uses, it provides treated water for storage batteries.

The ion-exchange resins are contained in a transparent plastic tube. Small holes in the top cap prevent excessive flow through the bed of resins, and deionized water is delivered through a plastic tube. As water passes through the apparatus, metallic and other ionic solids are taken out of solution.

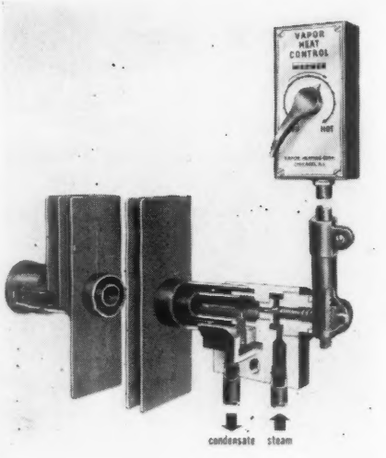


Automatic Heating Equipment

The Vapor Unizone system for heating coaches or any open-body car has been developed by the Vapor Heating Corporation, Chicago. It uses only one thermostat and one steam regulator which automatically supplies steam to all of the floor and overhead radiation and steam for the wash-water heat exchanger.

For sleeping room cars, the Vapor Modizone system has been reduced to two master thermostats, two skin thermostats, three steam regulators and a steam admission valve in each room with remote control. By turning the remote control, the passenger adjusts the valve orifice to admit more or less steam as required.

The Vapor Aquazone system uses liquid as a heating medium, circulated by a pump through the floor and overhead heating radiators. These liquid systems are heated by train-line steam, by waste heat from diesel engines in the cars or by a small heater fired by oil or propane fuel.



Waste Retainer

A package-type waste retainer, a development for combating waste grabs, hot boxes and other journal troubles, has been developed by the Hulson Company, Chicago. Made of synthetic rubber, the device holds the waste against the journal at a pressure for adequate lubrication.

The retainer, trade-marked Flex-Pak, can be applied to standard A.A.R. boxes without removal of the brass. Impacts from low rail joints, rough coupling, etc., are absorbed by the retainer which returns the waste to the proper position. Slots included in the bottom allow packing to be forced through the retainer when the waste is applied.

Reinforced Felt Tape

An adhesive backed felt tape has been made available by Products Research Company, Glendale 3, Cal. This

Ribbonrail Service...

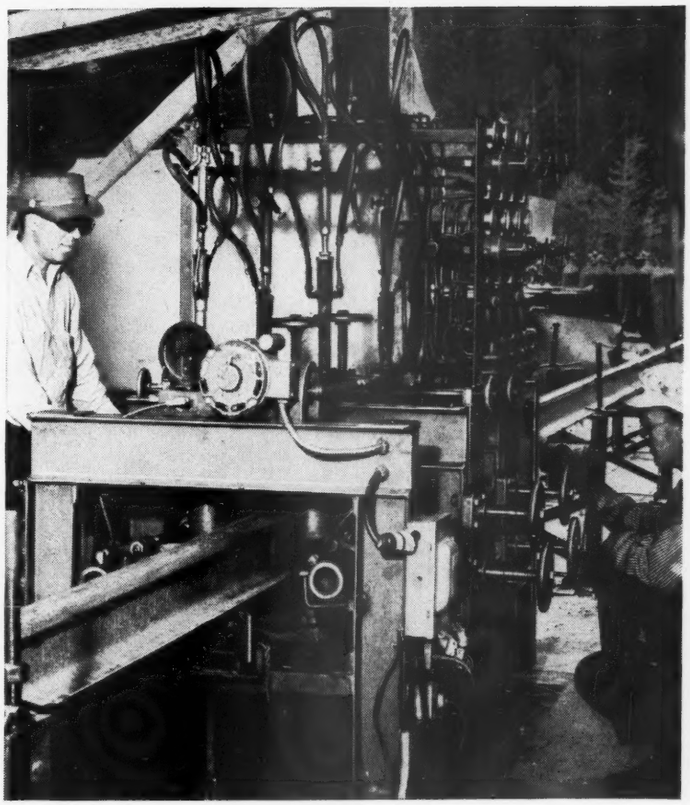
IN YOUR USED RAIL PROGRAM

Will Save You Money

It's poor economy to re-drill cropped rail for re-use in secondary or yard track. When you do that you end up with 300 or more joints per mile — joints that multiply maintenance expense.

Many railroads are cutting maintenance costs by using OXWELD'S RIBBONRAIL Service and equipment to make used rail into continuous welded rail — for use in secondary locations. The multiple lengths save you money. Here's how:

Put your used rail into a RIBBONRAIL Service program and save money. Ask OXWELD for more information.



RIBBONRAIL Service at work — an OXWELD pressure-welding machine quickly produces continuous rail.

Cropping battered ends of used rail prepares the rail for welding . . . the same equipment used for new rail performs this operation.

The cropped rail ends are welcome in the scrap drive . . . You help the national defense effort, and get a premium price for the scrap.

RIBBONRAIL needs no joint maintenance since there are no joints.

Used rail lasts longer when it becomes RIBBONRAIL . . . there are no ends to batter, no joints to wear.

OXWELD RAILROAD SERVICE COMPANY
A Division of Union Carbide and Carbon Corporation
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Carbide and Carbon Building Chicago and New York
In Canada:
Canadian Railroad Service Company, Limited, Toronto

"Ribbonrail" is a service mark, and "Oxweld" is a trade-mark of Union Carbide and Carbon Corporation.

product, known as Kling Felt, eliminates the need for gluing or tying.

Uses include rattle and squeak deadening; sealing against dust, wind, fumes and foreign matter; vibration and shock cushioning in fragile crating.

The felt is produced in rolls from 1/3 in. to 66 in. wide in a variety of thicknesses, and as a gasket die-cut to specifications.

Torque Converter

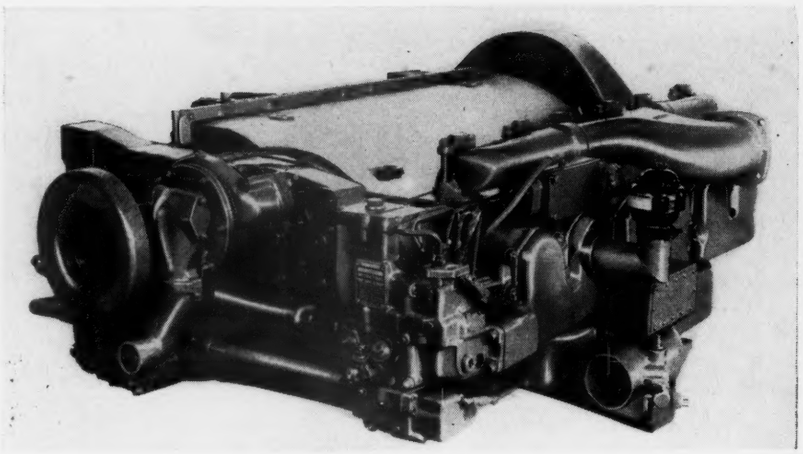
A single stage device combining a hydraulic torque converter and hydraulic coupling to provide automatic transmission for service equipment, locomotives, rail cars, etc., has been introduced by the Torcon Corporation, Ashtabula, Ohio.

This converter can be used with gas or diesel engines rated up to 300 hp. It is roller-bearing equipped. It has a variable torque ratio up to 3:1 and uses standard S.A.E. No. 10 motor oil. Major elements of the unit consist of the converter pump, converter turbine and reaction chamber. Piston-ring oil seals permit passage of a small amount of oil to provide continuous bearing lubrication.

Control Circuit Jumpers

Control jumpers, consisting of a 250-volt multiconductor cable and two plug heads, are now being offered by the Pyle-National Company, Chicago.

Intended for diesel-electric locomotive service, the cable and heads are vulcanized together to form a one-piece unit, which sometimes incorporates as many as 27 circuits. The plugs, 5 3/16 in. in diameter and 9⅞ in. long, are designed to absorb the flexible strain imposed on the cable during operation.



Horizontal Diesel

A new addition to a line of 84 lightweight units, the horizontal 200-hp. model NHHB-600 diesel engine, has been announced by the Cummins Engine Company, Columbus, Ind.

This product was designed for rail car applications and for city and intercity buses. It is a six-cylinder unit which produces full power at 2,100 r.p.m. It has a compression ratio of 15.5:1, displacement of 743 cu. in., and bore and stroke of 5⅛ in. by 6 in. Small dimensions and minimum weight make it applicable to underfloor installations.

Rail Flange Lubricator

A self-contained mechanical rail flange lubricator has been introduced by the Rail Flange Lubricator Company, Portland 10, Ore. The device mounts on the spring saddle of steam locomotives and the journal housing on diesels where it will properly lubricate the flange.

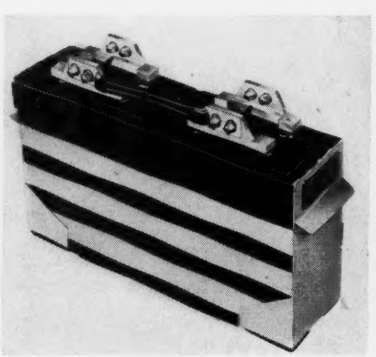
Lubrication is accomplished by a gear-driven roller chain that runs through a reservoir of graphited grease which is mixed by rotating agitators. On logging roads, friction drag has been reduced without loss of power due to slippage. The lubricators are designed to withstand engine vibration and road shock and function with a minimum of service.

The grease container can be filled with a grease gun and the reservoir holds enough lubricant for a run of 300 to 500 miles.

Antiskid Strut Grating

Development of Grip-Stud Grating has been announced by the Globe Company, Chicago. This product presents an antiskid surface on the edges of a series of formed struts. The grating's open area is in excess of 75 per cent of the total recticulated surface.

Its light weight recommends it for uses such as railroad running boards, cat walks, or work platforms. Material used in its manufacture is sheet steel or aluminum of gages ranging from 12 to 16.



Aluminum Battery Tray

A tray for storage batteries has been introduced by the K. W. Battery Company, Chicago. The device has the service advantage of the hard rubber jar wood tray arrangement, in that only one cell need be changed if a leak develops. It has an easily opened hinged vent cap which is closed automatically by the starting motion of the train.

Car Heating System

A simplified heating system for railroad passenger cars has been designed with a minimum of piping and controls. Products of the Minneapolis-Honeywell Regulator Company, Minneapolis, the units consist of conventional finned pipes running the length of each side of the car through which a smaller steam tube is installed. A

for 75 years

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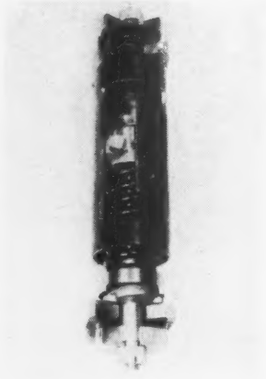
return pipe is connected to this heat exchanger making a closed hot water circulating system.

Steam is introduced into the inner tube, and electrically driven pumps at each side of the car circulate the non-freezing solution of water. Three thermostats are used for temperature control, one car thermostat, one fresh air and one discharge air thermostat. These thermostats control the operation of a single motorized valve which meters the steam to the heating system.

Synthetic Rubber Packing

Adapter kits for air-operated power contactors, reversers and dynamic braking switches have been designed by the General Electric Company, and the American Locomotive Company, Schenectady, N. Y., for "in-service" Alco-G.E. locomotives.

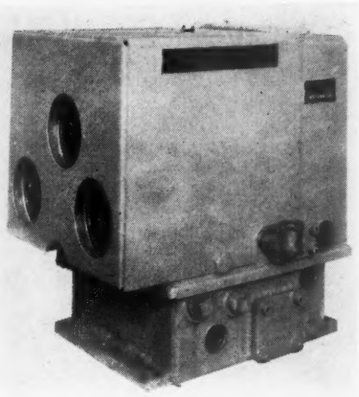
These control devices, using synthetic rubber packing, require lubrication only once a year, while older leather packed units are generally lubricated six times a year. Each kit consists of the materials necessary to convert one control device to synthetic packing.



Friction-Type Snubber

Recently made available is a friction snubber, a simplified shock absorber. It can be used to control the movement of railway truck coil springs to reduce damage to lading and discomfort to passengers. The device is produced by Houdaille-Hershey Corporation, Buffalo, N. Y., and is sold by General Steel Castings Corporation, Granite City, Ill.

This snubber contains three segmented shoes faced with a welded-on brake lining. These shoes are forced outward against the barrel under pressure from a precompressed coil spring. Design of the snubber mountings provides universal-joint action to accommodate any angularity change of the snubber due to relative movements between the spring plank and bolster.



Governor Replacements

A simplified governor has been made available, through the use of an adapter kit, for installation on earlier models of American Locomotive-General Electric 1,600-hp. diesel-electric road locomotives.

The speed pilot valve and feed limit pilot valve of this device designed by the General Electric Company and the American Locomotive Company, Schenectady, N. Y, have been made identical in size, eliminating the necessity of separate renewal parts stocks.

External piping has been reduced, eliminating the separate oil reservoir. Electrical wiring was simplified through elimination of the governor-off switch.

Gas Filtering Recorder

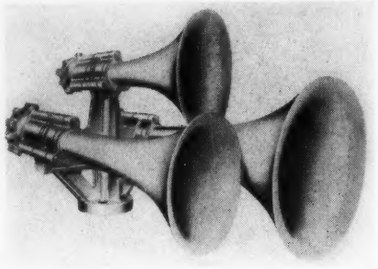
A multipurpose instrument applicable as a recorder of transient phenomena; monitor for equilibrium condition; pick-up for warning systems; operator of control devices; and detector of leaks has been developed by E. K. Von Brand, Dobbs Ferry, N. Y.

The medium under test is sampled at a uniform rate through a moving filter tape which is guided past a recording head. Adjustment of sampling rate and tape speed facilitates calibration. The instrument utilizes a 110 volt, 60 cycle power supply.

Hose-Clamping Machine

A hose-clamping unit for applying Punch-Lok clamps to air-brake hose has been introduced by the Westinghouse Air Brake Company, Wilmerding, Pa. Designed to apply clamps with uniform tension, the device eliminates most of the manual effort involved in clamp application.

The machine is pneumatically operated. The operator places the hose in the device and presses the pedal. The sequence of clamp tightening, punch locking and shearing of clamp tail, occurs automatically. The manufacturer has adopted these clamps as its standard for air-brake and signal hose. The clamps are packaged one thousand to a carton.



Locomotive Horn

A chime type, multiple horn device ranging from two to five units, depending upon the chord and power desired, has been introduced by the Leslie Company, Lyndhurst, N.J.

In the power chamber of the unit, known as the Leslie Supertyfon, a valving arrangement, formed by a diaphragm as it vibrates, permits use of the operating air to move the diaphragm in both directions. This valve action keeps the diaphragm deflection and stress low and permits the use of a thin flexible member. An output of 50 per cent of the horn's capacity is produced with an air consumption of 48 cu. ft. per min., while full output requires 95 cu. ft. per min. The chime horn is available in a choice of chords to simulate different steam whistles.

Plastic Ventilating Fan

Critical aluminum and bronze for blowers in small totally enclosed, fan-cooled a.c. motors, is now being replaced by plastics by the Westinghouse Electric Corporation, Pittsburgh. The plastic blowers consist of a polyester resin, reinforced with glass fibers.

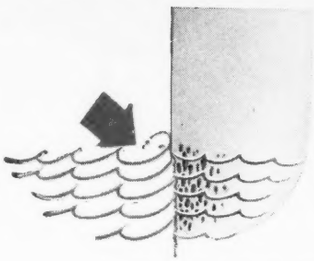
These blowers are unaffected by the chemical agents that attack metals. They can be used in corrosive atmospheres. The manufacturer is applying plastic blowers to its Life-Line motors of 5 and 7½ hp. capacity, at 1,750 r.p.m.

Fire Extinguisher

An air-pressurized fire extinguisher of 1-qt. capacity for protecting street and railroad cars, electrical equipment, etc., is now available. Called the Alfco Pressurized Fire-Gun, the device was introduced by American-La France-Foamite Corporation, Elmira, N. Y. It aims and operates like a gun. The maker states that it hits the fire

(Continued on page 56)

Beat Erosion...

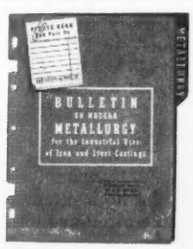


GUN IRON CAST PARTS

The proof of Gun Iron's erosion resistance has come from a wide variety of applications. One typical example is the case of cylinder liners for diesel engines. Chemical impurities in the water used for coolant cavitate ordinary liners to the point where they are useless long before worn out. Gun Iron liners satisfactorily withstand erosion and at the same time give longer wear on the cylinder wall. Users report tremendous savings in maintenance and replacement costs.

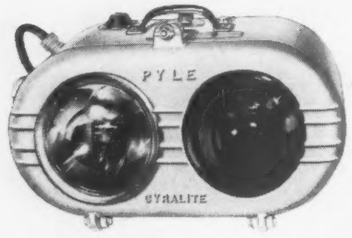
If *your* cast parts are subjected to frictional wear, heat, pressure or erosion, it will pay you to investigate Gun Iron. Our engineers are ready to assist you in determining its value. **HUNT-SPILLER MANUFACTURING CORP., 379 Dorchester Ave., Boston 27, Mass.**

Canadian Representatives: Jos. Robb & Co., Ltd., 4050 Namur St., Montreal 16, P.Q.



***HERE IS A PRACTICAL GUIDE** for the user of iron and steel castings . . . 24 pages of technical data on many types of metals and alloys. Write for your free copy.*

(Continued from page 52)
target accurately with no unnecessary loss of liquid, and requires no pumping. The extinguisher is recharged by pouring in more vaporizing fluid. Pressure can be applied with any standard air chuck.



Sealed Beam Lights

Two new type sealed-beam Gyrolites have been developed to provide more adequate train protection. These units, made by the Pyle National Company, Chicago, are adaptable for general rear-of-train use, or for front-of-train use in slow-speed service such as switcher locomotives.

Permanently mounted on the rear end of cars, the high intensity moving beam travels in a circular motion. Two models can be furnished with a Type Par-56 200-watt locomotive sealed-beam lights mounted within a cast aluminum alloy housing. The combination model has in addition, a second Par-56 lamp mounted in a door as a stationary white back-up light. Two types of automatic controls are available, the air pressure type and the generator voltage type.

Compressor Valve

A check valve has been introduced by the Pennsylvania Pump & Compressor Company, Easton, Pa., for use in discharge lines of air or gas compressors. Known as the PPC Aircheck Valve, the device was designed to prevent compressor damage by safeguarding against failure of operating personnel to open a valve when starting up.

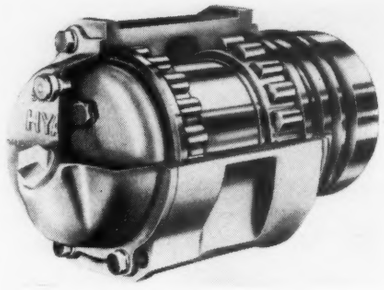
Installation of the valve dispenses with the customary arrangement of stop, safety and globe valves. It permits repairs without shutting down the system when more than one compressor is on the line.

Convection Type Heater

Explosion-proof heaters for use in atmospheres containing gasoline, petroleum, naptha, or acetone have been introduced by the Electromode Corporation, Rochester 5, N. Y. These heaters are approved by the Underwriters' Laboratories for use in Class 1, Group D hazardous locations.

The heating element consists of a nickel-chromium resistor wire, insulated and embedded in a finned aluminum casting.

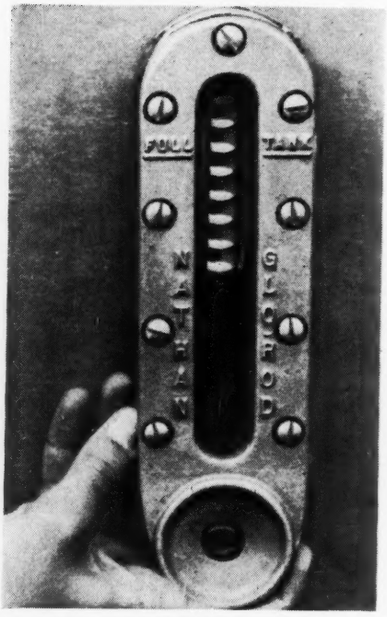
The grid remains at a low operating temperature, but has high thermal conductivity. The heaters are made in three models with ratings of 2,000 4,000 and 6,000 watts.



Freight Car Roller Bearings

Roller-bearing journal boxes for freight cars have been developed by the Hyatt Bearings Division of General Motors Corporation, Harrison, N. J. They can be installed to replace existing plain-bearing equipment with minimum alteration to side track frames.

The journal boxes are grease lubricated and bearings are of the straight radial type. Both the journal boxes and bearings can be removed from the car axles without breaking the race fits. The housings for integral box type side frames are designed so that they can be reversed to present a new wearing surface in the bearing load zone.



Liquid Level Gage

The new line of Glo-Rod liquid level gages, recently introduced by the Nathan Manufacturing Company, New York, can be used to provide accurate reading of liquid levels in diesel oil, lubricating oil, or cooling water tanks. The gage uses the principle of light refraction in liquids to provide the readings.

These gages are designed for use on diesel fuel and water tanks up to pressures of 10 lb. per sq. in. and temperatures up to 210 deg. F. and for water-alcohol or water-ethylene mixtures. Models are furnished for flashlight illumination to pipe light through a transparent plastic rod or ready to plug into a standard 110 volt outlet.

Restaurant Chain Picks Railroad Motif

"Whistle Stop No. 1," the first unit of a proposed national chain of restaurants to be designed, built and operated with a maximum of railroad atmosphere, was opened in Chicago on June 5. Designs and operating methods of the chain have been drawn up by the Whistle Stop Corporation of America, which arranges for local ownership of individual units under franchise agreements.

The front of each restaurant resembles the front of a diesel locomotive flanked on either side by mechanically operated semaphores. Directly behind is a glass-enclosed combination kitchen and frozen custard stand where chefs in enginemen's garb prepare sandwiches and fountain foods. Service to individual places along the 30-seat lunch counter is handled by a miniature freight train that is automatically "dispatched" to the proper "station" by the chef on "orders" from a "stewardess" who "unloads" the food and places it on the counter.

So highly steeped in railroad terminology is the literature of the corporation that the restaurants are referred to as "stations" and the owner-operators as "stationmasters." The traditional restaurant meal ticket has been drawn up in the form of a commuter's ticket. And if an operator requires the services of a delivery truck, a special home delivery truck painted to resemble a diesel locomotive, complete with a diesel-type horn, is specified.

Translucent color-photo murals, four by seven feet, depict scenes of travel interest of a particular area. Different sets of these murals will be rotated from restaurant to restaurant as more members enter the chain, according to announced plans.

"MARASMUS OF THE I. C. C."

Many people have noted, usually with sympathetic concern, the troubles which have been afflicting the Interstate Commerce Commission. With a mounting volume of work, the agency's complement of experienced staff has been dwindling. Commission membership itself has lost much of the attraction it once possessed for men with the qualifications for such important and exacting duties. The undeniable shrinkage of the agency's position in public esteem has been ascribed to numerous and complex causes—but it isn't necessary to seek a multiplicity of subtle explanations when plain starvation is as evident as it is here. No horse is able to do twice the work on half the feed.

"A Dilley of an Answer"

But why have the I.C.C.'s rations not been kept in some reasonable relationship to its work load? A young man named Huntington in the government department at Harvard University (*not* Harvard Business School, of course) has come up with a dilley of an answer to that riddle; and the Yale Law Journal for April obligingly provided him a platform from which to expound his dicta, which were published under the heading, "The Marasmus of the I.C.C." The use by this young man of the obscure term "marasmus," meaning about the same thing as "erosion," typifies his analysis, which is rather more ingenious than ingenuous. He acknowledges some help from C. E. Childe, with whose notable career as a transportation authority most readers of these pages are sufficiently familiar.

We hope Mr. Huntington will consider himself complimented by our opinion that he gives promise of qualifying as a worthy heir to the Childe tradition of transportation analysis, which has as its central theme the dependable iniquity or error of the railroads. Mr. Huntington ascribes the I.C.C.'s anemia to its excessive love for the railroads which, he reveals, has alienated shippers and farmers from the commission; and has led to loss by the I.C.C. of political favor. Hence the meager appropriations, and the consequent "marasmus." This thesis is argued with a mass of footnotes which fully equal in wordage the text itself—an effective defense mechanism, because hardly anybody is going to take the time to check all the cases the author cites, to see whether they really add weight to his conclusions.

Mr. Huntington believes that the future of government relationship to transportation lies with such agencies as the Antitrust Division of the Justice Department; the Departments of Commerce, Interior and Defense; and the price stabilization agencies. "Obviously," he says, "the rationale for maintaining [the I.C.C.'s] independence has ceased to exist, and it becomes necessary to subordinate this agency to some other agency possessing a broader outlook and a broader basis of political support." Whether the railroads could continue to exist under more punitive regulation than that from which they now suffer, is an aspect of "the broader outlook" that doesn't concern Mr. Huntington.

The charge of undue concern by the I.C.C. for the railroads' welfare rests heavily on a graph showing average railroad ton-mile revenue in relation to the index of wholesale prices, with 1913 taken as 100 per cent, and with rates showing higher than the price index most of the time. Aside from the questionable value of any index purporting to embrace identical data for four decades, there is evidence easily available of the rate of return earned by the railroads under I.C.C. regulation.

This evidence is certainly pertinent to the question of I.C.C. "favoritism" of the railroads, and would completely refute the argument that the regulators have been guilty of undue liberality. The selective Mr. Huntington ignored such inconvenient data.

When a youthful scholar neglects important evidence pertaining to his thesis and thereby reaches conclusions which the inclusion of this evidence would not sustain, one may doubt whether the scholar himself or his more mature colleagues are the more to blame. Certainly, the "marasmus" article sheds no particular glory on the

critical capacity of Mr. Huntington's academic environment.

Quite evidently, it isn't only the I.C.C. that is suffering from "marasmus"—the same disease appears to be widely prevalent in the field of transportation economics in most of the colleges and universities of the country, with a few highly noteworthy exceptions. And there is "marasmus" in transportation economics on the campus for the same reason, primarily, that there is "marasmus" of the I.C.C.—namely, undernourishment.

The Association of American Railroads has an admirable program for cooperation with the schools at the elementary and secondary level—and pedagogically acceptable materials from the railroads are being used in some 30,000 schools. A mutually helpful liaison between the railroads and business historians has been established, thanks largely to the devoted efforts of three or four men (see this space in our May 12 issue); but even this contact is by no means as general as it could and should be. Beyond these instances, there are relatively few university departments of economics and related subjects which have close contacts with top railroad management. And for such liaison to be established it is usually necessary for the academic people to be much more aggressive than such people usually are by nature—the initiative, that is, seldom comes from the railroads.

Students of economics never did get any particular encouragement from railroad managements to engage in transportation studies; but such encouragement was not badly needed when the railroads were practically the only large industry about which there was sufficient documentary information available to permit academic analysis.

This condition no longer exists. There are now plenty of fields besides transportation which afford materials for economic scholarship—most of them holding promise of far greater rewards for scholars, both in fame and fortune. If a scholar does go in for transportation studies—he is likely to consider whether he will advance himself further by a thoroughly objective approach, or by such a spectacular *tour de force* as this "marasmus" article.

Most Important Opinion Leaders

We revert again to the opinion, previously expressed in this space, that the professors are the nation's most important opinion leaders. Like nuclear fission, they can be a great constructive force—but they won't be if they are ignored, and get no encouragement from anybody except political opportunists and subversive elements. And as far as the regulatory commissions are concerned, aside from adequate salaries and staffs, no one activity would probably contribute as much toward greater competence in regulation as the strengthening of academic scholarship in transportation—the principal source from which the most competent regulators of the past were drawn.

THE MECHANICAL PEOPLE HAVE A WEIGHTY JOB

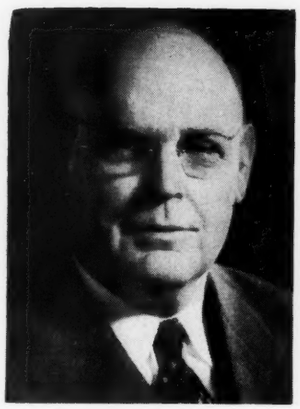
Tuesday of this week the Mechanical Division opens its twenty-sixth annual meeting at San Francisco. This organization is in some respects the victim of the very nature of the job it has to do. Much of its work is in the refinement of details and holds little appeal even to railroad men not involved directly in locomotive and car operation and maintenance. Among the subjects on which committees of the Mechanical Division are at work, however, are a number of concern to railway officers in practically all departments.

Two such subjects are the development of standard floor plans for passenger cars and improvement in the hot-box situation.

The development of standard floor plans for passenger cars is a subject in which many interests are involved. The problem has been handled cooperatively between the railroads and the car-building industry. Steady progress has been made and undoubtedly will continue. This is a matter of importance to the railroads because it involves a possible opportunity of effecting an appreciable reduction in the first cost of new passenger rolling stock.

Another problem of this kind in which all railway officers are interested is that of improving journal-box service. During the past two or three years this has risen from a technical mechanical problem to one in the consideration of which more than one railroad president is taking a hand. Some of the work which is being done by the Mechanical Division, and which will be reported on during the meeting this week, looks toward improvement in the functioning of the elements of the present journal bearing and box assembly. Other items look toward the development of improved designs to reduce service attention, maintenance, mechanical failures, and hot boxes.

All of the projects being dealt with by the committees or by the research department are of importance in improving safety, serviceability, and economy of railway motive power and rolling stock, but most of them arouse little curiosity outside of the mechanical department itself. Some of them involve the operating department—such, for instance, as train partings which is a subject that engages the perennial attention of the Committee on Couplers and Draft Gears. But such questions as the service life of draft gears, or the life expectancy of snubbing devices, and the year-by-year modification of specifications for materials to keep them abreast of improvements in quality and new knowledge as to their use, do not arouse great interest outside the mechanical department even though the ultimate effect of the committee work is definite savings to the railroads. There isn't much glamor of publicity to be got in the successful performance of these duties—but there is plenty of grief for everybody if they are not pursued with diligence and intelligence.



CHAIRMAN
B. M. Brown
General superintendent motive power, Southern Pacific, San Francisco

VICE-CHAIRMAN
H. T. Cover
Assistant vice-president (operation) and chief of motive power, Pennsylvania

EXECUTIVE VICE-CHAIRMAN
V. R. Hawthorne
Chicago

SECRETARY
Fred Peronto
Chicago

San Francisco Host to Mechanical Division

On Tuesday of this week the Mechanical Division of the Association of American Railroads holds the first session of its 26th annual meeting. The meeting, at the Fairmont Hotel, San Francisco, will continue for three days—June 24, 25 and 26.

As the reports have been distributed in advance of the meeting, complete presentation on the floor of the convention is unnecessary; only brief summaries of the principal features of each report need be presented. In the program mailed to the members emphasis is placed on being prepared in advance of the meeting for a thorough discussion, to be participated in also by representatives of the car and locomotive builders and other supply companies.

The program for each of the three days follows. Time is California Daylight Saving Time.

PROGRAM

Tuesday, June 24
10 a.m.

Address by D. J. Russell, president, Southern Pacific

Address by W. J. Patterson, member, Interstate Commerce Commission

Address by B. M. Brown (chairman), general superintendent motive power, Southern Pacific

Action on minutes of 1951 annual meeting

Appointment of committees on Subjects, Resolutions, etc.
- Unfinished business
- New business
- Report of General Committee
- Report of Nominating Committee
- Discussion of reports on:
  - Locomotive Construction
    - Steam and Electric Locomotive Section
    - Diesel Locomotive Section
    - Gas-Turbine Locomotive Section
  - Axle and Crank-Pin Research
  - Safety Appliances
  - Passenger-Car Specifications

Wednesday, June 25
9:30 a.m.

Address by E. H. Davidson, director, Bureau of Locomotive Inspection, I.C.C.

Address by L. L. Adams, manager—transportation planning, United States Steel Corporation

Discussion of reports on:
- Brakes and Brake Equipment
- Geared Hand Brakes
- Loading Rules
- Special Committee on Forest Products Loading
- Specifications for Materials
- Couplers and Draft Gears
- Arbitration
- Prices for Labor and Materials
- Lubrication of Cars and Locomotives
- Development of Hot-Box Alarm Devices

Thursday, June 26
9:30 a.m.

Address by F. B. Whitman, president Western Pacific

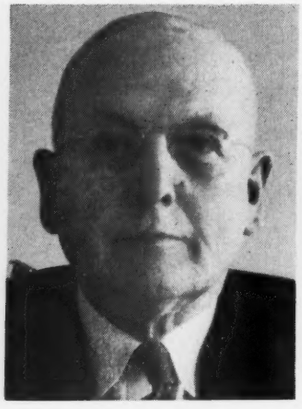
Discussion of reports on:
- Tank Cars
- Wheels
- Car Construction

Election of members of General Committee and Committee on Nominations

Report of Committee on Resolutions

W. M. Keller
Director

W. M. Martin
Mechanical Engineer



C. A. Richardson
Refrigeration Engineer

R. E. Abbott
Engineer of Tests

A.A.R. Mechanical Research Reorganized

Personnel changes and consolidation of activities promise more effective and integrated functioning

The Mechanical Division of the Association of American Railroads recently consolidated its Refrigerator Car Research Bureau with the general research organization to provide more general utilization of the staff. Pre-

Equipment used at the A.A.R. Mechanical Division Central Research Laboratory, Chicago, for measuring the amount of moisture accumulated in insulation.

L. L. Olson
Electrical Engineer

W. M. English
Assistant Engineer

viously, assignments in both refrigerator and mechanical research had been handled by a "project head" with sufficient technicians to carry out each separate investigation. This practice resulted in groups specialized in use of a few items of equipment, with the result that indiscriminate use of the force on all projects was limited.

Work organized on this basis can easily develop the attitude in individuals that all their work must be with certain types of cars or motive power. Conversely, a "keep out" attitude found in persons of strong possessive characteristcs can easily curtail good engineering counsel from others on the staff whose limited experience in the matter under immediate consideration may be offset by such a wide general experience that valuable suggestions are likely to be made.

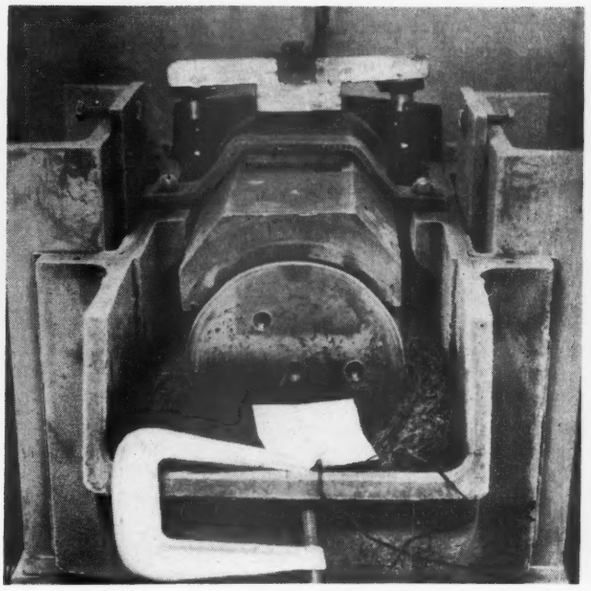
The Director

The new policy places all mechanical research personnel under the supervision of W. M. Keller, director of mechanical research, whose appointment and career, leading to the position of assistant mechanical engineer of the Pennsylvania, was briefly covered in a sketch in the January 21 *Railway Age*, page 59. The A.A.R. research force has been reorganized to place the staff on types of work rather than on kinds of equipment. These men will, under the present arrangement, pool their experience and handle work regardless of the type of equipment under study.

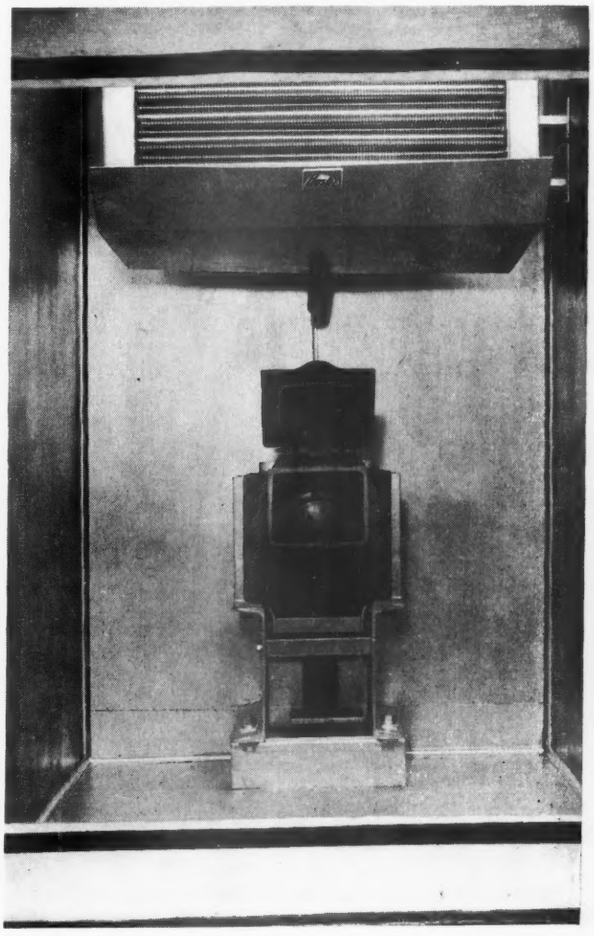
How New Policy Works

For example, the title "engineer of truck tests" has been changed to "engineer of tests" and the person in this position will hereafter supervise outlining and conducting road tests, whether they are conducted on trucks or other parts of rolling stock and equipment. Assisting technical forces will be utilized on whatever project requires their talent at the time, and will be moved from one project to another as the progress of the work dictates. It is believed that this new policy will result in improved flexibility in the staff, giving each technician a working knowledge of all the important investigations under way, as well as adding to his overall value to the organization.

Some of the more important appointments are as follows: W. M. Martin, mechanical engineer, senior assistant to the director; C. A. Richardson, refrigeration en-



Full-size 5½-in. by 10-in. journal assembly with section of box removed for observation of action of journal-box packing at low temperatures. The journal can be revolved at controlled speeds equivalent to vehicle speeds of 4 to 100 miles an hour.



Looking into controlled-temperature room with journal-box assembly extending into the room. Coils shown at the top will reduce the temperature to —40 deg. F. When the door is closed, observation is through a glazed window.

gineer, in general charge of all projects having to do with refrigeration and allied subjects; W. M. English, assistant engineer, acting as a general assistant to the director; R. E. Abbott, engineer of tests, and L. L. Olson, electrical engineer. The electrical engineer is responsible for instrumentation such as the electrical strain gages in general use in the division.

Staff to Be Enlarged

A chemical engineer will be added to the staff. The Mechanical Research Office will then have a staff capable of handling the wide variety of problems contemplated under the expanding research policy of the A.A.R. It has also been decided to concentrate research in the Central Research Laboratory at Chicago. A new pilot journal-test machine has been built to provide a quick means of obtaining data on cold weather starts, or other conditions where the need for full journal load is not required. The atmosphere surrounding the journal box in this machine can be cooled down to —40 deg. F.

A new machine shop is now in use for miscellaneous operations such as the preparation of specimens for tensile test, the making of test machine parts, and the preparation of working models or special devices. This shop is capable of any operations that will be encountered in the research of the division. It is used jointly with the Engineering Division. A new hydraulic spring-testing machine on order is intended for a study of the expected service life of freight-car truck snubbers. This machine will be capable of rapidly vibrating the springs under simulated load conditions and will permit wear data to be obtained on the various friction devices in use.

A full-scale journal-bearing-testing machine has been designed and is now under discussion with the manufacturers expected to build it. This machine will be capable of simulating road service conditions on journal bearings up to six by eleven inches in size and will be housed in a laboratory room at Chicago which will be capable of maintaining temperatures between —60 and 130 deg. F. The machine will be available in carrying on the extensive studies already under way of lubricating oils, waste, and other associated parts of the journal box.

New Work Planned

Under consideration for Mechanical Division research is a study of the service stresses of diesel locomotive wheels. Measurement of stresses in a revolving wheel is best obtained by the use of SR4 resistance strain gages. In work of this type, the circuit from the recording oscillograph equipment (located at a fixed point) to the resistance strain gages on the rotating wheels is completed by means of brush contacts on a revolving drum commonly referred to as slip rings. These slip rings are mounted, under the circumstances previously encountered, on the axle between the wheels, but on diesel locomotives the electric driving motor and gears occupy this space. Consequently, some form of slip ring must be used that can be located at the end of the axle and have its electrical connections made outside of the journal box. This problem of instrumentation is now being investigated.

Insulation Studies in Progress

Laboratory exploration of means to provide a moisture barrier for refrigerator-car insulation is in progress. Because humidity and ambient temperatures can be closely controlled in the laboratory, more accurate data on this subject can be obtained by laboratory experiments than would be the case in road tests. Thus, because the laboratory test conditions can be accurately reproduced, it is possible to get test data on different types of moisture barriers that will be strictly comparable. As soon as the laboratory data indicates that an effective and economical barrier has been found, it will be tried in road service to make sure that benefits shown in the laboratory will hold good under road service conditions.

In order to correlate with current road conditions the laboratory test data on journal-box lubrication now being obtained, a number of member railroads are furnishing complete hot-box reports to the A.A.R. giving details of the circumstances surrounding each failure. This data is being summarized to show the age of packing in the box at the time of failure, type of truck, number of cars in the train, weather conditions, etc. This information is being examined with the object of finding the major factors responsible for hot boxes, and what corrective measures are necessary to reduce them.

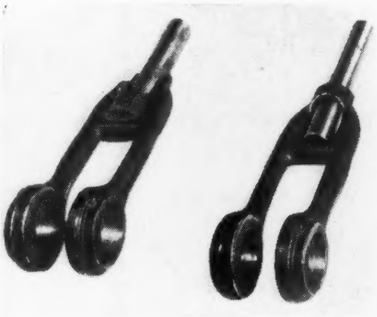
Although the hot-box problem is given top priority in Mechanical Division research, the other work is being pushed forward actively. It is planned to make further additions to the staff as soon as qualified persons can be located.

An augmented staff with greater facilities is necessary to keep abreast of technological progress, and the accomplishment of this goal is already under way.

SOMETHING A LITTLE DIFFERENT in safety posters has been distributed to 59 of the largest railroads in the United States and the two major Canadian lines, through the courtesy of the Dayton Rubber Company's Railway division. The complete series consists of four cartoon type posters, 10 in. by 13 in., each printed in black and three colors on a yellow background.

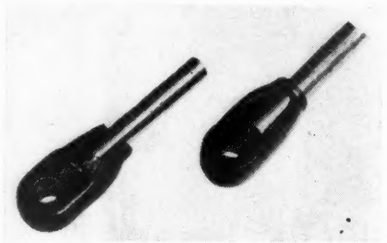
What's New in Devices

For Cars and Locomotives



Arc Welded Jaw and Eye

An arc weld jaw and eye have recently been placed on the market by the Schaefer Equipment Company, Pittsburgh. Both brake devices have a self-aligning feature which makes them

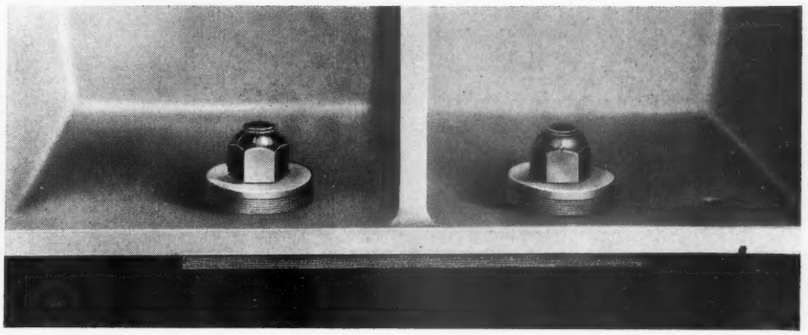


easy to apply in any shop where arc welding equipment is available. They are designed primarily to save time and labor in application and reflect the growing trend toward arc welding as accepted practice in railroad shops. The Schaefer arc weld jaw and eye are drop forged from high quality steel selected for good welding properties and are suitable for new equipment, as well as repair programs. The arc weld jaw is available in four sizes depending on the diameter of the rod. Two styles of arc weld eye are manufactured—with ¾" pin hole for vertical hand brake rods and with 1⅛" pin hole for horizontal rod application.

Anti-Corrosion And Rust Compound

A compound called Special Aresto has been developed to stop corrosion and rust. The product, available from Battery Supply Company, Boston, Mass., produces a soft, self-sealing film that is water, moisture and corrosion proof. It is designed to be painted or sprayed on the inside of battery compartments and on terminal clamps and battery posts.

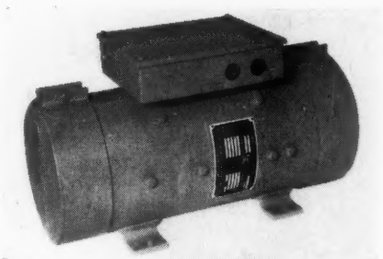
Before applying, the accumulated corrosion should be cleaned, using a preparation of water and ammonia or sodium bicarbonate, or using a wire brush and wiping clean with a saturated cloth. The compound can then be applied by spraying or brushing. Length of service varies with severity of exposure to various elements. Normal service ranges from 1 to 3 years.



Diesel Engine Mounting Pads

To make certain that diesel-electric locomotive engines and generators are mounted to prevent transmission of vibration and cracking of engine bases and other parts, mounting pads have been improved by Fabreeka Products Company, Boston 10, Mass.

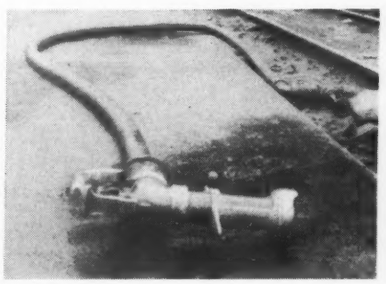
Pads of ½ in. thickness give satisfactory service and loads of from 50 to 100 lb. per sq. in. on pads are preferable. The generator is usually supported by an extension of the engine bed plate, the generator's mounting flanges bolted to the bed plate. In such installations, the pads cushion the generator and engine and have no effect on alignment of the shaft.



Motor-Generator Set

A small and compact motor-generator set for control and signalling applications has been introduced by the Safety Car Heating & Lighting Co., New Haven 4, Conn.

This unit has an input of 64 volts and a rated output of 32 volts, 6 amps., and a rated speed of 2.500 r.p.m. The set is designed for d.c. to a.c. power conversion, having inherent voltage and speed regulation without the use of any governor or external regulator.



Swivel Fuel Coupling

An improved model of its older rigid fuel coupling, the new Quarter-Turn Swivel Coupling, has been introduced by the Protectoseal Company, Chicago 8. The manufacturer claims that the new device has the following advantages: elimination of one or two possible sources of leakage on diesel refueling operations; faster refueling connection; less gasket maintenance;

and access to practically all diesel locomotives.

The unit screws directly into a 2-½ in. nozzle valve, making the installation permanent. The movable portion of the coupling is positioned between the lugs of the fuel fitting and the locomotive, and tightened by a quarter-turn of the handle.

The gasket on the fitting is placed in the stationary member of the coupling. This gasket is compressed without any sliding or shearing action over the seat which is the main cause of gasket maintenance and consequent leakage.

Coupler Carrier Pads

Coupler carrier pads have been introduced by Fabreeka Products Company, Boston 10, Mass., to reduce the noise from couplers and cushion impacts received from the coupler shank. Steel wear plates are needed to prevent abrasion of the pads by the movement of the couplers between the cars.

With certain types of coupler centering devices, it is desirable to provide coupler slide end buffer pads with protecting steel plates in order to absorb abrasion, impact and reduce noise. When coil springs are part of the coupler centering device, coupler slide spring flanged bushings are used to prevent breakage of the springs.

Blower Unit

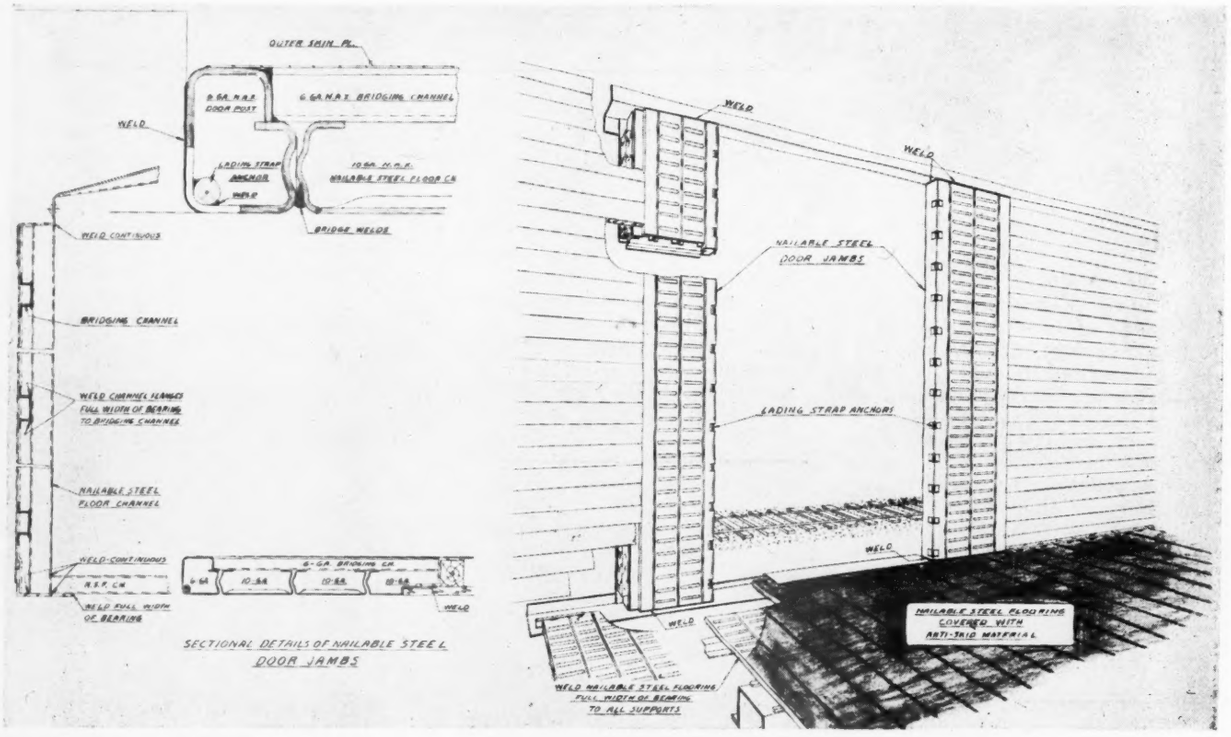
Safety blower units, designed for air movement in kitchen and dining cars, are now in production by the Safety Car Heating & Lighting Co., New Haven 4, Conn.

These blowers can be furnished with or without resilient mountings. Each unit has a fan motor and wheel which can be removed from the housing without disturbing the duct system. The totally enclosed motor with cover is easily removable for internal inspection. Its sealed type, high temperature bearings require no lubrication. The devices are available with 32, 64 or 110 volt motors with air delivery of 500, 1,000, 1,600, or 1,900 cu. ft. per min.

Lading Strap Anchor

A full length intermediate lading strap anchor which can be used in conjunction with existing door post anchors has been developed by the Pullman-Standard Car Manufacturing Company, Chicago. With this device for reducing side lining damage, shippers can anchor unit loads with high weight and small volume to box cars without nails, and they can also use the lading strap anchor with temporary bulkheads for other types of shipments.

The new Pullman-Standard lading



Details of the installation of Nailable Steel door jambs and flooring to a test box car.

Box-Car Door Post Area Protection

An adaptation of the Nailable Steel flooring principle has been made to the door post area of a test box car maintained by a Chicago industrial plant. The application consists of Nailable Steel door jambs on either side of the door opening and Nailable Steel flooring over the adjacent floor area.

The door post area protection was developed by the Great Lakes Steel Corporation, Detroit 29, as a result of suggestions by railroad people for some means of eliminating the severe damage which occurs from the fixation of grain doors and blocking.

The sloping guide plates and ample opening of the anchor permit easy insertion of the lading strapping.

Sealing the strap is easy and can be done without damage due to the rounded edges of the anchor.

The anchor holds the strap firmly without bulge and distributes the load over the full length of the side post.

strap anchor for intermediate posts keeps box car linings and floors nail-free. It thereby eliminates hazards to personnel, lading and equipment, as well as costly repairs to linings and floors when temporary anchoring devices are used.

The anchor is recessed into a slot in the lining so that the exterior is flush with the side lining to avoid catching lading or denting cartons. It extends the full height from the floor to the roof and has approximately 13 locations for fastening straps. The number of anchors to be installed per car and the points of installation are determined by the needs of the road involved and the types of lading to be secured.

The anchor does not interfere with side lining replacement, and it can be removed and replaced without disturbing the lining. The anchor further can be easily replaced or repaired, if damaged in service, using common bolts or nuts. No concealed welding or special fasteners are used. The side lining installation is not weakened; full width lining boards can be securely nailed to separate nailers on each side of the anchor.

The guide plate on either side of the anchor has sloping surfaces to guide the steel strapping through the anchor. The anchor itself has rounded edges to prevent damaging the strapping by sharp bends.

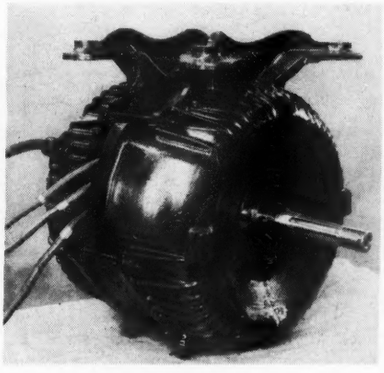
Non-Electric Heat Control

A heat control that operates without electric thermostats, relays motors, or solenoids, has been marketed by Fulton Sylphon Division, Robertshaw-Fulton Controls Company, Knoxville 4, Tenn. These controls are actuated by steam.

This railway car heat control can economically convert any hot car to a comfortable automatically controlled car. It can be applied to steamheated suburban cars and coaches, or cars of other types. The supply of steam to the floor radiation on each side of the car is regulated by a 1 in. Sylphon modulating, differential control valve which has two temperature control bulbs, each connected to the hot chamber bellows by capillary tubing.

The fresh air bulb is mounted under the car and is responsive to outside air temperatures. This bulb automatically adjusts the car temperature. The car control point is raised from 70 to 75 deg. F. if the outside air drops from 50 to 0 deg. F.

The car body bulb is mounted under a seat and is responsive to car body temperatures. This valve is a modulating controller so when the car bulb is 68 deg. F. the valve is wide open. When the car temperature reaches 70 deg. F. the valve is tightly closed. When the car temperature is between 68 and 70 deg. F., the valve is in some throttled position. The only remaining equipment is an emergency manual shut-off valve and thermostatic traps to drain condensate.



Power Supply System For Cabooses

An alternator-rectifier system, designed to furnish power to cabooses and similar rolling stock for the operation of communication equipment and other electrical devices, has been developed by the General Electric Company, Erie, Pa.

The alternator is axle-driven. When operated at a gear ratio of 5.28 to 1, the system will produce 80 amp. at 40 volts d.c. over a car speed range of 10 to 90 m.p.h. With lower gear ratio and less speed range, the equipment can be made to provide even greater output.

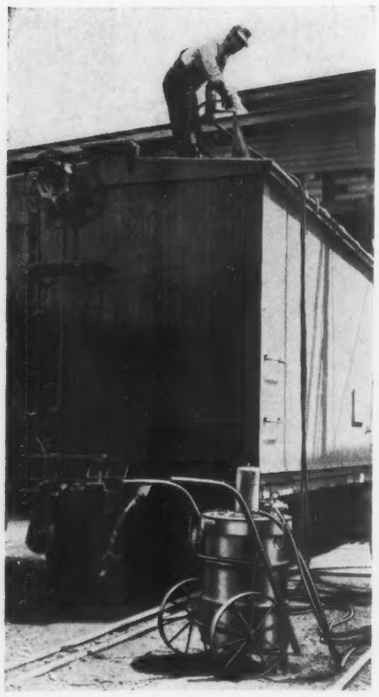
The metallic rectifiers have a special protective coating and are forced ventilated. The control limits both the maximum output current and voltage.

Two Air-Operated Pumps

The Gray Company, Minneapolis 13, Minn., has developed two air-operated pumps for car and locomotive maintenance work. One is trade-named Powerflo and is designed for the application of protective coatings such as rust preventives, insulating materials and undercoatings.

Powerflo pumps operate in original drums and eliminate unnecessary transfer of materials from one container to another. They handle a variety of industrial coatings from heavy semifluid mastics to light fluids, including adhesives, saturants, sizings, putties, rust preventives, calking compounds and waterproofing materials.

The second new Graco pump is termed Fast-Flo. It is a reciprocating pump with a 2-in. riser tube for handling paints, thinners, solvents, naphthas,



Powerflo pump spraying a rust preventive on a refrigerator car.

lubricants, coolants, alcohols, adhesives, non-corrosive chemicals, and many other fluids and semifluids, including delivery of lubricating oil to diesel engines. It has full double action with equal delivery on both up and down strokes, and develops fluid pressure equal to the air pressure supplied.

A feature of the Fast-Flo pump is that it is not necessary to pressurize the container. Operating pressures range from 35 to 200 p.s.i. Air consumption is about 1 cu. ft. per min. for each gallon delivered per minute with heavy liquids, and half this much for low viscosity fluids such as solvents.

Air Compressor Cylinders

A line of replacement air compressor cylinders for Gardner-Denver compressors used in diesel locomotives has been announced by the Hunt-Spiller Manufacturing Corporation, Boston 27, Mass.

According to the manufacturer, these cylinders are made of gun iron and have approximately 42 per cent more cooling area than the original. This tends to reduce carbon deposits and delivers air at cooler temperatures, prolonging service life.

Foam Rubber Seat Cushioning

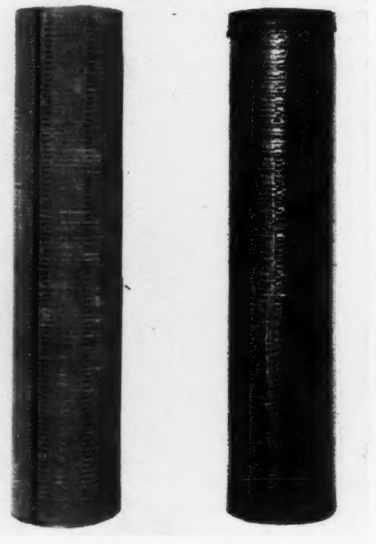
Improvements in latex foam rubber, necessitated by the transportation industry's requirements for seat cushioning, have been developed by the Sponge Rubber Products Company, Shelton, Conn. Called Aircraft-Texfoam, the product consists of animal hair fibers impregnated with latex foam rubber.

It is claimed that all the cushioning qualities have been retained while features of lighter weight, lateral stability and tensile strength are added. The product weighs 2-¾ to 3 lb. per cu. ft. against 4-½ lb. for standard latex foam of comparable compression range. The lateral stability claimed by the manufacturer adds a comfort feature for passenger-car riders who might experience fatigue that originates in wobbling motion of seating.

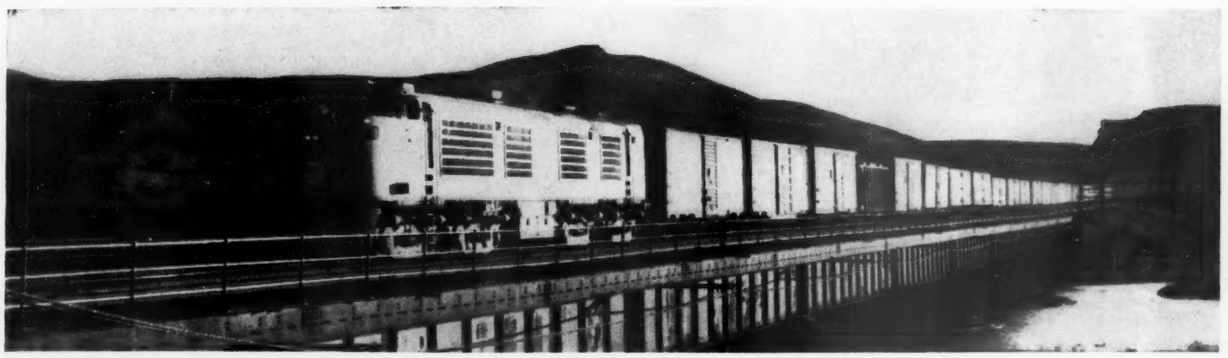
Fiber-Disc Filter

Wm. W. Nugent & Co., Chicago 22, offer a new large-area, large-capacity lubricating oil filter made with an improved form and arrangement of the filter stack It consists of similar cut-out fiber discs to afford filtering action both through proximate discs and adjacent portions of the same discs for maximum filtering capacity. The discs are insoluble in oil or water.

The filter cartridge, size 4L, consisting of spool, disc filter recharge, and cover spring, may be used in present Nugent oil filter shells. Because of the large filtering area, the stacked disc recharge is reported to be lasting four to six times longer than the cotton waste sock-type filter recharge. The discs are insoluble in oil or water; the size of solid particles removed is 3 microns or less. The recharge will not remove additives from heavy duty detergent oils. Absorption of foreign solids by the filter recharge is 2 ½ times the weight of the recharge.



New recharge (left) weighs 6¼ lb. After 3,100 engine-miles (right) it had a drained weight of 22½ lb.



A gas-turbine-electric locomotive brings a train over the Green river in Wyoming.

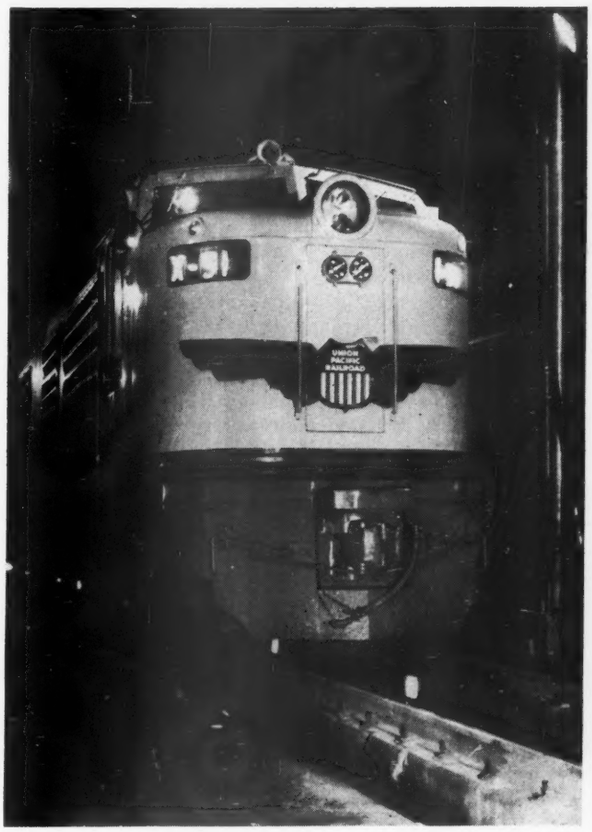
Locomotive No. 52 on the 1.14 per cent grade between Ogden, Utah, and Wahsatch.

Union Pacific's Gas Turbines in Regular Service

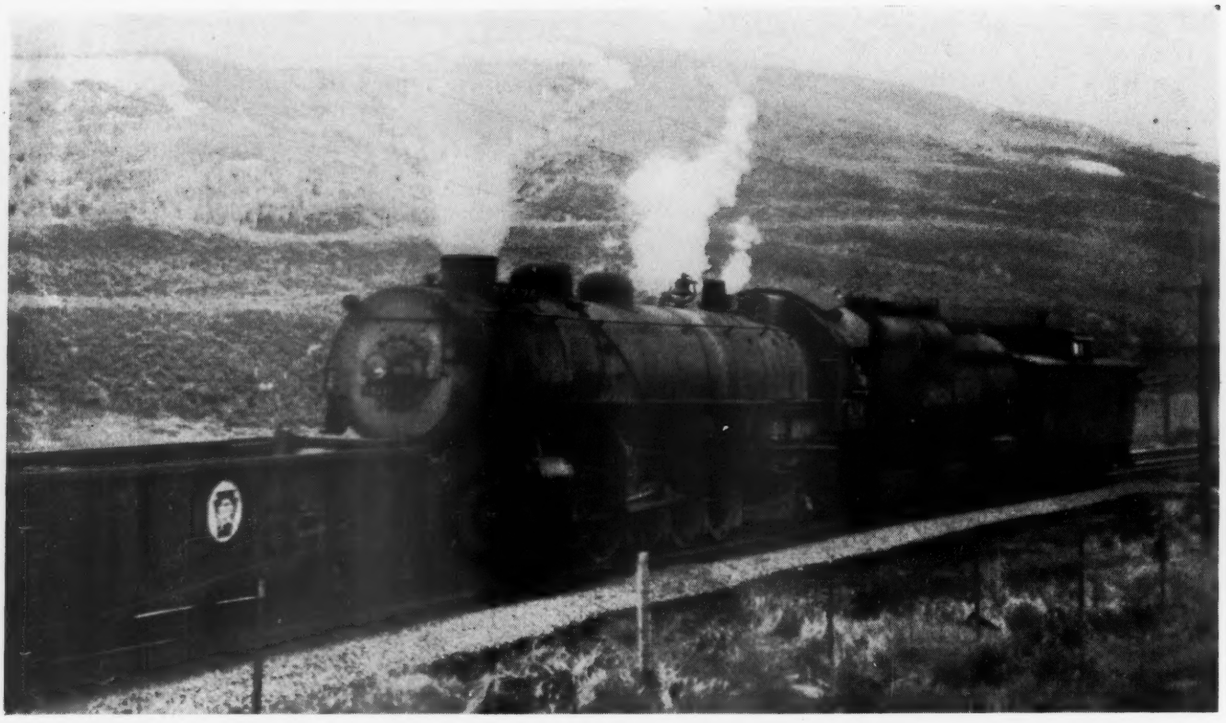
Gas turbine-electric locomotives are now operating on the Union Pacific between Green River, Wyo., and Ogden, Utah, a distance of 175 miles. Locomotives Nos. 51, 52 and 53 are in regular pool service.

Westbound, with a ruling grade of .82 per cent, one of these locomotives hauls trains of 5,000 tons. Eastbound, with a helper, from Ogden to Wahsatch, Utah, with a ruling grade of 1.14 per cent, the tonnage is 4,800 to 5,000. Eastbound, without a helper, the locomotives will handle 3,800 tons. The weight of each locomotive is about 554,000 lb., and they are conservatively rated at 4,870 hp.

The average time for the round trip, including yard movements, servicing and inspection, is 16 hours. Normally each locomotive makes three round trips every two days. The locomotives use Bunker "C" type fuel



Locomotive No. 51 on the service tracks at Green River.



A steam helper on the Ogden-Wahsatch grade.

which has been processed to remove harmful elements.

There have been only two locomotive failures attributable to locomotive equipment since the first unit, No. 51, went into service January 31, 1952. The second unit, No. 52, was placed in service April 9. The third unit, No. 53, was placed in service May 7, and the fourth unit is scheduled for service during June.

The locomotives are operated by regular engine crews without special supervision. The photographs were taken May 3.

BENCH MARKS AND YARDSTICKS–16

At a recent meeting of magazine publishers, the head of a national association of advertising agencies listed a number of industries which are "substandard" in the ratio of advertising expenditures to gross revenues. He mentioned several chemical manufacturing companies which do no advertising and which are not much larger in their present business volume than they were before World War II — contrasting their relatively static condition with that of other manufacturers in the same industry which have grown tremendously and which are generous advertisers. He suggested a cause-and-effect relationship between the volume of advertising and the ratio of growth in gross business.

But the railroads were the industry which got most of the critical attention from this speaker. The relatively unsatisfactory position of the railroads— compared to most other industries — he attributed largely to the failure of the railroads to devote more than a microscopic ratio of their gross revenue to advertising. The contrasting practice of the air transport industry was cited to emphasize the point.

The situation isn't as simple as this speaker made it out to be. For one thing, most railroads are not nationwide institutions as most of the airlines are — and advertising is pretty expensive when it reaches many people who are not potential customers.

On the other hand, there is usually some selective way of advertising to reach potential customers. Newspaper advertising, for instance, is localized; and advertising in business publications can be directed to the particular industries which are the largest potential shippers. Then it is always a possibility the railroads could do collectively what they could not do individually with profit — such as promote travel by train, for instance.

With most products, advertising alone does not make sales, but it is a powerful adjunct to the efforts of the sales force. The railroads are a peculiar industry sales-wise, in that the individual companies cooperate in providing service more than they compete with each other in producing it. Such an industry could not very well have the same sales and advertising pattern as most other industries.

But saying "our problem is different" is not saying we have no problem at all. There must be an optimum ratio of advertising expense — of a kind "tailored" to meet each railroad's particular circumstances — which would produce optimum results in the way of revenue. How many railroads have discovered a formula which will fit individual circumstances most efficiently? Isn't this a part of railroad sales effort which deserves more detailed attention than it has yet received — on most railroads anyhow?

(Photos courtesy Canadian National)

The Canadian National uses nine scale-test cars which move over the system to check 142 CNR track scales and 131 privately owned track scales. Here a scale inspector has just placed a 40,000-lb. test car on a 200-ton capacity track scale and is receiving a "right-on-the-beam" signal from the weighman at Point St. Charles yards, Montreal.

How Excessive Weighing Delays Cars and Increases Costs

Local railroad forces can help develop information leading to weight agreements—Shippers and receivers frequently lose money by insisting on weighings

By E. W. COUGHLIN
Manager, Railroad Relations
Car Service Division
Association of American Railroads

Prior to World War II it became almost a fetish to weigh every carload of freight on track scales. In his excellent volume "Freight Terminals and Trains," published in second edition in 1925, John A. Droege, then general manager of the New York, New Haven & Hartford, says: "In theory, every pound of freight transported should be accurately weighed, and this condition is being rapidly approached. The object is to insure the receipt of the revenue to which the road is entitled, and to protect the shipper against overcharge."

During war years, with terminals crowded, manpower shortages, and the urgent need for saving every possible car day if available cars were to "stretch" to meet the needs of military and commercial traffic, this concept was reversed. Numerous checks by representatives of the Car Service Division of the Association of American Railroads and the Interstate Commerce Commission revealed serious delays to cars and the tying up of men, motive power and yard trackage by cars awaiting track-scaling.

Much car detention was caused by weighing an enormous number of cars of low grade materials—sand, gravel and crushed stone—for government building projects. The rail movement in many instances was in territory where yard trackage was at a premium and track scales were not conveniently available, requiring out-of-line movement of cars to points having track scales. Explanation of the problem to government authorities brought forth, on July 24, 1942, the following directive from the chairman of the War Production Board:

WAYS AND MEANS TO GREATER CAR EFFICIENCY

This is another in a series of articles by Mr. Coughlin on basic principles and preferred practices in freight car distribution and handling which was inaugurated in the February 11 Railway Age. The next article is scheduled to appear in a July issue.

"Contractual provisions specifying or requiring that weights be determined by railroad or warehouse scale shall not be used where such provisions may require back-hauling or cross-switching or cause congestion or delay in traffic or traffic handling. Under such circumstances contractual provisions shall authorize the determination of weights by cubic content, standard unit weights, sampling, estimates or other method mutually agreeable. Existing contracts should be modified when practicable in conformity with this policy."

With this generous backing little difficulty was encountered in arranging between the interested parties for handling troublesome movements under weight agreements. These agreements were set up by the weighing and inspection bureau operating in the territory in which the movement occurred. In some cases, where shippers or receivers or railroads stubbornly resisted the directive, it was necessary for the I.C.C. to issue specific orders forbidding weighing, usually with an exception providing for track-scaling a certain volume of cars periodically to obtain average weights.

Cumbersome and Expensive

The only objection to this process was that it was rather cumbersome and expensive, and usually entailed considerable delay in getting it into operation. First, it was necessary to develop, from information furnished by the interested railroads or from checks by Car Service Division or I.C.C. representatives, rather complete detail as to the movement and the amount of back haul or delay. Then it was necessary to try through cooperative handling between shipper, receiver, railroads and the weighing bureau to reach a mutually satisfactory weight agreement. Failing in this the next step was issuance of the I.C.C. Service Order, which must then be followed by the weight agreement.

Since World War II's end, considerable track-scaling of carload freight has been resumed. It is well to remember, however, that where reasonably accurate weights can be obtained without such weighing, economies may be gained in switching costs, car days and other factors which will more than offset any possible slight increase in revenue gained by actual track-scale weighing.

Of interest in this connection, recommendatory Rule 301 of the Railway Accounting Rules as published by the Accounting Division, A.A.R., reads:

"All carload freight should, where conditions permit, be weighed at point of origin, en route, or at destination, before delivery is made, except where waybill weights are authorized by weight agreement, tariff, classification, or when revenue is computed on other than weight basis." Car Service Rule 15 and A.A.R. Accounting Division Freight Mandatory Rules 25, 26, 27 and 33 will also be of interest to the serious student of this subject.

WEIGHING OF EMPTY CARS—PERIODIC LIGHT-WEIGHING

Type of Car	(a) First Reweighing at Expiration of	(b) Subsequent Reweighing at Expiration of
Composite wood and steel underframe	15 mo.	48 mo.
Steel underframe, with wood, steel or composite superstructure frame	15 mo.	48 mo.
All-steel open-top cars and type "LO" covered hopper cars	30 mo.	30 mo.
All-steel flat cars	30 mo.	48 mo.
All-steel house or stock cars	30 mo.	48 mo.
Refrigerator cars	30 mo.	48 mo.

Car Service Rule 11 provides for light-weighing and weight-stenciling of all new freight cars, and for the periodic re-light-weighing and restenciling with tare weights of various types of cars at intervals, as stated in the table, or when materially changed by repair or alteration.

Generally speaking, those paying the freight stand to profit somewhat by the use of weights as stenciled on cars in figuring freight charges, rather than by light-weighing each car before loading or after unloading. This by reason of the fact that over a considerable period of time freight cars tend to lose rather than gain weight, by reason of natural attrition of parts subjected to wear and weathering. For example, if a car bears weight figure of 58,000 lb., stenciled on it perhaps two years earlier, and is so loaded as to produce a gross weight, through track-scaling, of 158,000 lb., freight charges will be paid upon 100,000 lb. If the car has lost 400 lb. of weight in the two years interval since last light-weighing and stenciling, obviously the correct tare is 57,600 lb. and the amount of freight transported is 100,400 lb., hence the railroad transports 400 lb. free. In cases where material is sold on the basis of railroad scale weights this may be scant comfort to the shipper, who also loses payment for 400 lb. of the commodity transported. However, such a case probably would bring no anguished protest from the receiver, who would receive 400 lb. more material than he would pay for.

Generally, tariffs provide that cars may be track-scaled at request of the receiver after unloaded, a charge to be made against such receiver if the reweighing shows errors of less than a specified amount in the stenciled weight. No charge is made if the reweigh figure varies more than such a specified amount under or over the stenciled weight.

Reweighing for Patrons

Some instances possibly exist where unscrupulous shippers or receivers sell or buy commodities on railroad track weights. Such persons may call for light-weighing of cars before loading or after unloading. Or receivers may call for reweighing of loaded cars after receipt for the purpose of using either such new tare weight, rather than the stenciled weight, or the new loaded weight instead of the earlier loaded weight, in their business transactions. The weight used will depend on which one is most advantageous to them. Such individuals are in a very decided minority, and generally do not long remain in business.

Most of the firms that require empty weighing or a second loaded weighing of freight cars do so only to protect themselves, their customers and the railroads from possible under or over weights. It would seem to be a fact, however, at least in the handling of relatively inexpensive commodities such as sand, gravel, crushed stone, coal, or scrap iron, that the economic waste involved in large volume light-weighing of cars, or of reweighing loads, much overshadows the loss or gain in freight charges and sellers' or buyers' costs. In the writer's opinion, in the long run, shippers and receivers of such commodities as mentioned above would be better off if they accepted stenciled weights and original track-scale loaded weights.

In support of this conclusion the writer would cite one check of 18 carloads of scrap iron and steel received by a dealer in an eastern city. Reweighing, loaded, at a track scale near the receiver's yard of the 18 cars showed 11 of them carrying a total of 3,700 lb. over the earlier scale weights and 7 carrying 1,765 lb. less than the

Proper spotting of cars on scale at time of weighing is of utmost importance. The car must be clear of approach rails. For greater accuracy, car to be weighed should be uncoupled at both ends.

earlier scale weights. The 18 cars, therefore, carried, according to the destination scales, a toal of 1,945 lb. (108 lb. per car) more scrap than indicated by the scales over which originally weighed. If the receiver settled with his shippers on the basis of weights on destination point scales, he therefore paid the shippers, in the aggregate, for 1,945 lb. of scrap more than was shown on the original track-scale weighings; he also paid the railroad serving him $27.54 in reweighing charges. Since the location of track scales in this case required considerable switching across main lines in a busy and congested district and involved a loss of an average of one car day on each car scaled, the railroad obviously lost money for the reweighing.

The question may be asked why there should be any variation whatever in empty or loaded weights of cars, obtained at close intervals on different track scales. The answer is that—despite the high standards maintained for railroad track scales, the certification as to accuracy of scales by an authorized scale inspector, requirements that for light-weighing cars must be dry and free from ice or snow, with floors and hoppers clean, etc.—there is bound to be some slight variation in the weights obtained on an object as large and heavy as a freight car. Even a car which appears to the eye to be entirely clean may contain 200-300 lb. of ice in its floor boards after periods of thawing and freezing.

As evidence of this, the light-weighing rules provide that stenciled weights need be corrected, except for regular periodic reweighing and restenciling, only when reweighings show a variation of 300 lb. or more for other than refrigerator, tank and live poultry cars, and 500 lb. or more for refrigerator cars. Tank and live poultry cars are to be reweighed and restenciled only by their owners or authorized representatives.

Generally speaking, the interest of local railroad employees will extend only to developing those instances where track-scaling of cars, either loaded or empty, is materially delaying cars or causing considerable added switching. In these cases, the local forces should give transportation officers such details as the shipper's name, commodity, origin of shipments, consignee and destination, number of cars involved, the apparent reasons for weighing, reweighing or light-weighing, and the amount of car delay, switching or back haul. Transportation officers may elect to handle the case themselves or may pass it on to the manager of the proper weighing bureau for making weight agreements, if possible.

New Book . . .

THE NORTHLAND—ONTARIO, by O. T. G. Williamson, 8¼ in. by 5½ in., 110 pages. Bound in cloth. Published by Ryerson Press, 299 Queen st., W., Toronto, Ont. Price $1.50.

Not reviewed here in the first printing because its distribution was entirely local, this fine little book, first published in 1946, is now in its second printing and should properly be called to the attention of railway men. Its author is public relations officer of the Ontario Northland, and an expert on the geography and economy of the territory that railway serves. This work is devoted jointly to "Ontario's Development Road" and to the country north of North Bay—a natural outcome of the utter dependence of the two upon each other.

The historical portions are interesting and well-told. For the rest, the volume is a fascinating dissertation on what the north country of today is and is not. It explodes all kinds of hard-core myths—such as the belief that the country gets more unproductive the farther north you go, and that the region is too cold for farming.

The author, a life-long engineer specializing in grain elevators, before taking on public relations work, is particularly well-schooled in forestry and agriculture. And he writes well.

The diversity of the engineering problems encountered on a road like the Pennsylvania is exemplified by the fact that it has spent about $1 billion for property improvements since the end of the war, as for example at the diesel shop at Harrisburg, Pa.

J. M. Symes

Railroads Offer Young Engineers Large Opportunities

J. M. Symes points out that many engineering graduates employed by railroads are promoted to managerial or administrative posts—Seven of the Pennsylvania's 12 presidents have been engineers

I doubt that any other industry can offer more to the young engineer today, all things considered, than the railroad industry. And I don't mind telling you that —as we have needed them in the past and as we need them today—so will we need them in the future. As a matter of fact, the railroads' prosperity and expansion over the years are more directly related to engineering than any other technical profession." Thus spoke J. M. Symes, executive vice-president of the Pennsylvania, in an address on "The Civil Engineer in the Railroad Industry" at the 100th Anniversary meeting of the American Society of Civil Engineers in Philadelphia on May 19.

Mr. Symes said he was qualified to discuss this subject because he is not an engineer himself, a fact, he said, "that has been one of the principal regrets of my life, because our whole industry—its inception, its growth and its development—has been built around good engineering."

To impress his listeners with "the importance of engineering on the railroad with which I am associated," Mr. Symes pointed out that there are 1,130 graduate engineers working on the Pennsylvania at present, 848 of them civil, 170 electrical and 112 mechanical. "We attempt," he added, "to bring into our organization about 60 graduate engineers each year. During the past few years, we have taken in 178 of them, and these were recruited from 52 different colleges and universities scattered throughout the country. You will be interested in knowing that the Pennsylvania has had 12 presidents since its beginning over 100 years ago, and seven of these presidents were engineers, six civil and

Young engineering graduates employed by the Pennsylvania are given a three-year training course during which they have many "scattered and diversified" assignments. Among these, they are required to become familiar with every detail of the road's rail-laying practices.

one mechanical." Over the years the engineering graduates employed by the Pennsylvania have run about 75 per cent civil, 15 per cent electrical, and 10 per cent mechanical.

These engineering graduates, said Mr. Symes, are the "cream of the crop" in the Pennsylvania's organization. "They are the nucleus of our officer organization. Most of our superintendents, general managers, vice-presidents—and as a matter of fact, a former comptroller, our treasurer, some of our personnel officers, and many of our purchasing and traffic officers—came up with an engineering background."

Reciting his experiences as a member of a college committee several years ago, Mr. Symes noted that he was appointed to the committee upon the recommendation of R. E. Dougherty, then vice-president of the New York Central and now retired. He was appointed to the committee "principally because I was not an engineer." The members of the committee, he said, were mostly deans of engineering schools from some 15 or 18 colleges and universities. "I was somewhat amazed at the first few meetings I attended, to note the apparent shearing away from the railroad industry—as if we had the measles. I found that they were under the impression that the railroad industry had little to offer engineering graduates as compared with other industries."

Result of a Real Study

Apparently, based on a guide of railway officers, the committee had "tried to equate opportunities and salaries" of the engineers employed by the railroads. "Admittedly," said Mr. Symes, "on that premise it looked rather bad, but upon my insistance that a real study and appraisal be made of what happens to engineers after they are employed in the industry, they changed their views materially."

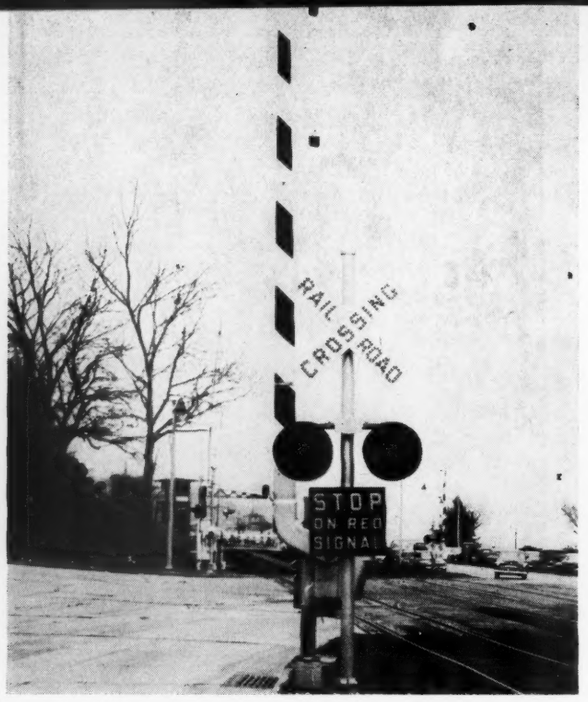
The speaker then cited a hypothetical example of the application of a course of training to which young engineering graduates are subjected on the Pennsylvania. "Bill Smith is a promising young man who will graduate —let's say from Purdue this June—as a civil engineer. Our chief engineer of the Western part of the railroad is in pretty close touch with Purdue and finds out that Bill is a promising young man, and has indicated that he likes railroading.

How It Works Out

"The chief engineer gets in touch with Bill and explains to him what he would be up against if he did come into the railroad industry. He is not disillusioned in any way—he is told of the scattered and diversified jobs he is going to have to go through during the next three years; that he is not on a 40-hour week: that the railroad must operate 24 hours a day, every day in the year; that his assignment will involve irregular hours; that he will be subject to call at any time (nights, Saturdays or Sundays); that he will be located here today and somewhere else tomorrow; that he will be required to spend time out on the railroad with track gangs and on rail trains; that he will be required to learn safety and operating rules, maintenance practices, signaling and interlocking operations, bridge work (how to build them and how to maintain them)." He is also told that he will have to learn how laboratory work is done by the engineer of tests, and that he will have to become familiar with correspondence and accounting at the divisional level and in the chief engineer's office.

"Periodical progress reports are made on Bill by his supervisory officers," continued Mr. Symes, "and at the end of his training period we know—and I am sure Bill knows—if railroading is to be his life's work. If we both agree on that point, then there is no limit to where he can go in the organization—it is entirely up to him. This is a hard course of training for Bill, but actually he has come up the hard way which, after all, is the best way. This three-year training course develops and brings out in a practical way what these engineering students really learned in classes in school."

The crossing protection and control tower at Court avenue are in harmony with the city park on the hill.



Complete protection was provided, in spite of restricted locations at some of the crossings.

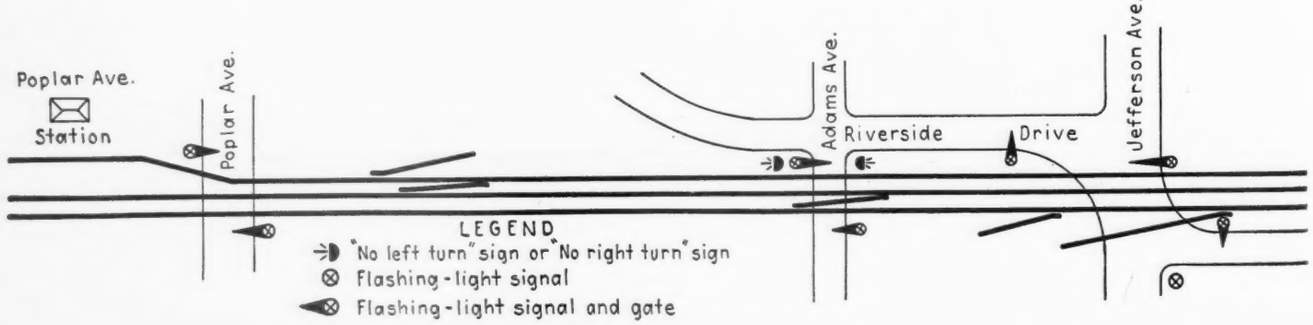
Illinois Central Installs Modern Protection at 13 Street Crossings

Flashing-light signals and gates, controlled automatically with superimposed manual control, improve safety and expedite street traffic

The Illinois Central has recently completed an installation of protective devices at 13 street crossings in Memphis, Tenn. Seven crossings are protected by conventional flashing-light signals, controlled automatically. The six other crossings, protected by gates as well as flashing-light signals, form an interesting group because they are in the heart of the city, between the business district and a heavily traveled thoroughfare along the Mississippi river. Careful engineering was required by the close clearances, and by the necessity for the installations to harmonize with the city planning program.

The tracks, which extend north and south parallel with the river front, are at the base of a steep slope, ascending east for about 300 ft. to a plateau on which the main business section of the city is situated. The city hall, library, post office and other public buildings of important size and architecture face Front street, the first north-and-south street along the top edge of the plateau. These buildings are surrounded by spacious lawns and parks which extend down the slope west toward the railroad and river front.

Three east-and-west streets—Union, Monroe and Court avenues—descend from the business section down the slope and across the tracks to connect with Riverside drive, which, as shown on the plan, runs north and south parallel to the tracks. The three east-and-west avenues are used primarily by passenger automobiles moving between Riverside drive and the business section. The vehicular traffic on these streets is at reasonably low speed. Riverside drive is a boulevard by-pass around the



business section of the city, and therefore carries considerable traffic. Approaching from the south, Riverside drive runs along the west side of the tracks until at Jefferson avenue it crosses the tracks to run along their east side to Adams avenue, where it angles off up grade to the east.

The two main tracks of the Illinois Central are also paralleled by a St. Louis-San Francisco industrial switching track, so that three tracks actually are involved in each of the six street crossings. The traffic on the two I.C. tracks along the waterfront is limited to 10 passenger trains and 3 freight trains daily in addition to switching moves to serve industries. The speed of all trains is limited to 20 m.p.h. The Frisco uses its track about once a day to make pick-ups and deliveries to industrial plants and yards.

Modern Crossing Protection

For many years each of the six crossings, at Union, Monroe, Court, Jefferson, Adams and Poplar avenues, has been protected by part-time watchmen on the ground. On account of the growing volume of motor vehicle traffic, protection by watchmen was difficult, and sometimes not as effective as desired. Therefore, the city authorities and representatives of the railroad cooperated in planning an installation of flashing-light signals and gates to provide the best available protection, of a uniform character, at all six crossings, and to include automatic track circuit control with superimposed manual controls.

The track circuits for automatic control of the protective devices are arranged in the customary manner, so that an approaching train causes the flashing-light signals and pedestrian bells to start operation at least 25 seconds before arrival of the train at a crossing. About five seconds after the signals start to flash, the gates are released, being lowered to the down position at least 20 seconds before a train arrives. The purpose of the manual control is to avoid delays to street traffic by making it possible to raise the gates and stop operation of flashing-light signals, if trains stop in approach sections, and are not to proceed toward the crossing for some appreciable time.

The superimposed manual control includes a control machine in a new brick tower on the north side of Court avenue just east of the tracks. This building was especially designed to blend in with the background of lawns and parks on the slope up to the public buildings.

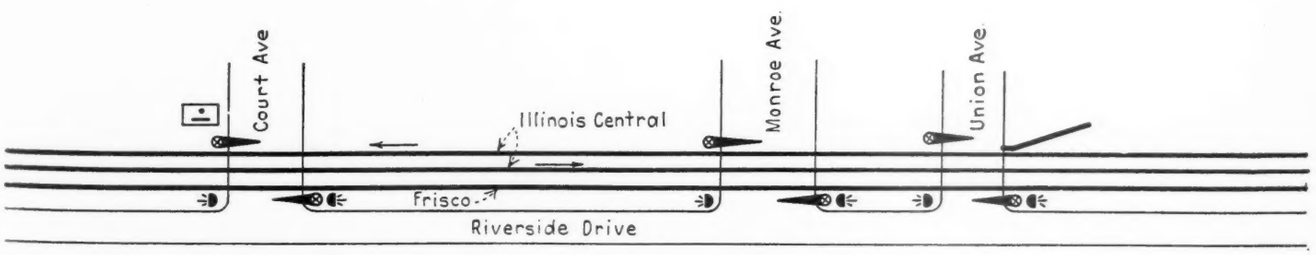
Automatic and manual control work together. Thus if a train stops in an approach section, the automatic time cut-outs operate, with the result that, after a predetermined time, the gates raise and flashers stop, thus allowing normal flow of street traffic. Traffic blocks may be further relieved by manual control, if conditions require, as is explained in the following example. There is a small outlying passenger station east of the tracks, just north of Poplar avenue. When a southbound passenger train approaches, the crossing protection begins to operate and gates are lowered at Poplar, Adams, and Jefferson avenues. The train stops at the station, with the locomotive 50 feet or more north of the north line of Adams street. When the tower watchman sees that the train has stopped, he pushes a control-board button on the southward "track" in approach to the symbol for Jefferson avenue. This causes gates to be raised at Jefferson avenue, and the flashers then stop operating. At the same time, a small white lamp is lighted near the button pushed, as a reminder that manual control for this track section is in effect. In the meantime, with the gates raised, the street traffic is free to move over Adams and Jefferson avenues. When the engineer "whistles off," the towerman pushes the "restart" buttons —one in the symbol for Adams, and the other in the symbol for Jefferson. This sets the flashing-light signals in operation and lowers the gates.

Exact Location of Gates

Varying conditions of grades, curves and curb lines at the different crossings required a special study to determine the location for each of the masts on which flashing-light signals and gates are mounted. At Union, Monroe, Court and Jefferson avenues, the space on the west side of the track is so restricted that hoods were omitted from the flashing-light signals in order to secure standard 8-ft. clearance to center of nearest track as well as clearance of the street.

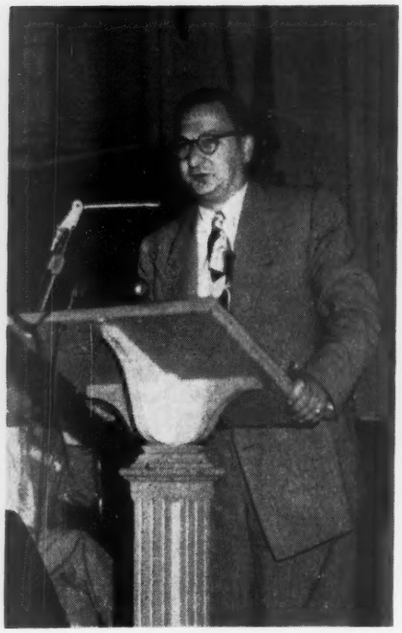
At Jefferson avenue, Riverside drive crosses the tracks at an angle. To secure standard clearance from the track, the mast for the northward gate on Riverside drive had to be located about 50 ft. in approach to the point at which the street line intersects the nearest rail. The center line of the mast is 1 ft. 3 in. from the street side of the curb. At this location the flashing-light signals were mounted on a separate mast in order to come within clearance limits of the track on one side and street on the other. An automatically controlled "No Right Turn" sign, with flashing yellow light above it, is mounted on a separate mast at the east side of Riverside drive just south of Union, Monroe and Court avenues. A "No Left Turn" sign is located on the west side of Riverside drive just south of Adams avenue.

This project of crossing protection was installed by signal department forces of the Illinois Central under the supervision of F. C. Brown, signal supervisor, and under the direction of H. G. Morgan, signal engineer. The gates and flashing-light signals were furnished by the Western Railroad Supply Company, and the relays by the Union Switch & Signal Division of Westinghouse Air Brake Company and by the General Railway Signal Company.



Numerous problems had to be overcome in installing the flashing-light signals, gates, and "No-Right-Turn" signs to provide complete protection.

S. P. Ruddiman,
president of the DT&I.



Pierre R. Bretey,
railroad analyst.

C. W. Dudley,
tax consultant.

Accountants Put Spotlight on Mechanization, Tariffs and Divisions

Elmer Hart heads division for 1952-53—Bretey discusses statistics used by securities analysts—Crowley, Kiley and Ruddiman address sessions at Detroit

Mechanization and simplification of paper work was the dominant idea at the 58th annual meeting of the Accounting Division of the Association of American Railroads, held June 10-13 at Detroit's Sheraton-Cadillac Hotel. This theme dominated committee reports as well as the exhibits of manufacturers. These were not the only considerations, however, for speakers at the business sessions of the group dwelt on taxes, pension plans for executives, and some of the means the financial analysts use in determining which railroad securities are good ones for the investor to buy. In addition, considerable discussion time was given to tariffs and divisions.

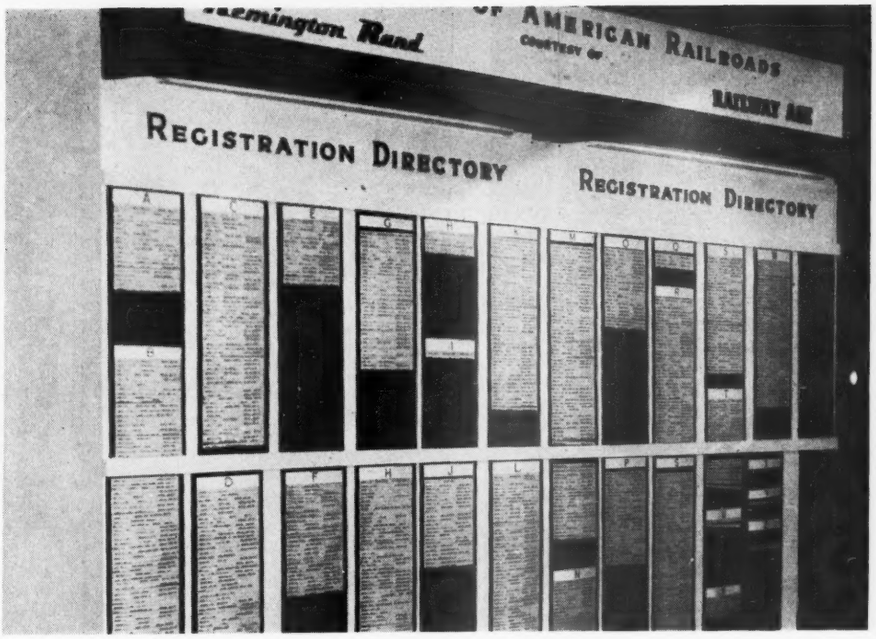
Praise for Accountants

Speaking to the opening session of the meeting, S. P. Ruddiman, president of the Detroit, Toledo & Ironton, commented on the growing importance of the accounting officer in railroad affairs, a reflection of the fact that expenses of all kinds are persistently rising. Prompt and accurate reports to management are more than ever necessary, said Mr. Ruddiman. So important has the accountant become that no important decision can be made by a railroad president without first consulting the accounting officer of his road.

Leo T. Crowley, chairman of the board of the Chicago, Milwaukee, St. Paul & Pacific, and J. P. Kiley, president of that road, took up the praise of the modern accounting officers where Mr. Ruddiman left off. However, Mr. Crowley particularly emphasized the need for men of the stature of the railroad accounting officers to get into public affairs more actively. Furthermore, he pointed out, everyone must stop being "impartial" to the point of inaction on important questions before the public as well as the business community.

Mr. Kiley, who had experience in the accounting department before he transferred to the operating department, also had praise for the accountant, and particularly for J. W. Severs, the Milwaukee's accounting and financial vice-president, who, as chairman of the division, presided over its sessions. The Milwaukee's president cited the fact that in the last few years the railroads had been spending money for capital improvements at the rate of more than a billion dollars annually. This, he said, has enabled the railroads as a whole to furnish "the best rail transportation service of their entire history."

Improving that service in order to meet competition,



This registration directory proved very popular with those who attended the convention.

however. Mr. Kiley went on. means continuing to make such investments. "as our means allow." Getting the money to make improvements is, in fact, in his opinion, the most important single problem facing the railroad industry today. Without sufficient earnings, "it is impossible to finance adequate improvement programs for an indefinite period." Also as "low earnings continue year after year it becomes hard to attract equity capital. I do not believe that we have yet reached the point where it is impossible to revive interest in railroad securities on the part of owners of capital. If I thought so I wouldn't be standing here today. I would be earning my living in some other business."

Historians No Longer

The Milwaukee president stated that in the past accountants have been management's reporters of history. Today, however, he said, quoting W. B. Given, president of American Brake Shoe Company, the accountant, out of his analysis of yesterday, "should be expected to point out bad spots—point them out by himself, let me emphasize, not leave the analysis up to others—and not only highlight them but on their basis, fight for improvements." Mr. Kiley mentioned as an example that on the Milwaukee, his accounting department had pointed out that several special passenger trains, always thought to be great money earners, had either been losing money or, at best, doing little more than breaking even on an out-of-pocket cost basis. As a result of these studies, "we developed the rule that sponsors of special trips must guarantee at least a minimum passenger load before special service will be supplied."

The Milwaukee's chief executive also mentioned that, partially as a result of the work of the accounting department, in the past three years the carrier had been able to discontinue more than 2,700,000 train-miles of unprofitable passenger service at a saving of $3,700,000 in out-of-pocket operating costs annually. He also described the Milwaukee's weekly forecasting of revenues and expenses, in which figures are projected to the end of the month. For these figures Mr. Kiley claimed fine accuracy and said that the road's management liked them "very much."

Speaking at the second day's session, Pierre R. Bretey, railroad analyst for the "Wall Street" firm of Baker, Weeks & Harden, told the railroad accounting officers what it is the financial analyst looks for in railroad statistics when deciding on what risk elements there are in railroad securities. Today, due to many factors, securities of bridge lines, as compared with other groups, are in a position of investment superiority, Mr. Bretey said. Similarly, due to other factors, the lines in the Southeast and Southwest have benefited in recent years, so that generally speaking their securities at present are more favorably looked upon as investments than those of the eastern roads.

Mr. Bretey discussed also the position of the finance and accounting officer in the railroad world today. These officers, he said, are the "custodians of net income." The accounting officer has "the primary task of developing operating budgetary controls, so flexible as to correlate expenditures with a variable cash inflow, thus minimizing extremes of variations in net income. Likewise his is the task to develop a capital budget, again adjusted to the varying tempo of cash inflow and cash outgo." The speaker then went on to outline some ways in which the accountant could be useful to the operating and traffic departments.

"Now I realize that many of you do prepare both annual budgets and interim statistical comparisons for the benefit of your operating and traffic departments," Mr. Bretey continued. "In all too many instances, however, proper correlation has been lacking and such data have not achieved the end of minimizing extreme fluctuations of net, particularly in a period of business decline.

"One procedure, which particularly minimizes extreme fluctuations of monthly net earnings, and for that reason is favored by virtually all railroad analysts, is the establishment of an equalization fund. . . . Another procedure my fellow analysts would overwhelmingly approve, would be greater publicity arising from abnormal factors affecting monthly earnings. . . . Still another procedure which some railroads have adopted has greatly impressed many security analysts. I refer to weekly budgetary controls. . . . Establishment of such controls necessitates greater cooperation with top management. They are very costly. Yet many of us attribute the relatively more stable earnings results of both the Illinois Central and the Burlington to the establishment of such controls."

Then Mr. Bretey, using the Santa Fe as an example, showed his audience on a large chart what figures the

Leo T. Crowley, chairman of the Milwaukee.

J. P. Kiley, president of the Milwaukee

Officers of the Accounting Division, left to right, front row: Elmer Hart, comptroller of the Pennsylvania, and chairman of the division for the coming year: J. W. Severs, vice-president of the Milwaukee, the retiring chairman; C. D. Peet, chief accounting and financial officer, Missouri Pacific, and newly elected second vice-chairman. Rear row, in same order: R. E. Keefer, division acting secretary; L. T. Ormond, ACL vice-president and first vice-chairman; and R. A. Seder, vice-president, A. A. R.

railroad analyst looks for and what figures he derives from the standard statistics.

Another speaker at the June 12 session was C. W. Dudley of the Washington, D. C., securities firm of Dudley, Algire, Jones & Ostmann. Mr. Dudley discussed the effect of taxes on industry generally, on the railroads in particular, and on the railroad executive especially. The present tax structure makes salary increases of little benefit to the executive, said Mr. Dudley. The result is, he went on, that instead of salary raises the modern executive is interested in stock bonuses, profit-sharing, deferred compensation and pensions. He then pointed out the advantages of the funded pension plan.

Generally speaking, railroads do not have such pension plans, but the advantages to the employees are so great tax-wise that it should be considered, in the speaker's opinion. "From a management standpoint, the funded pension plan's principal function is to provide a means of permitting the retirements of executives without undue hardship, so as to make way for younger men. Such plans have become so popular that it may not be long before the corporation without such a plan will be considered an unattractive place to work. . . . Its tax advantages are tremendous, especially in a period of declining tax rates, which I believe we are about to enter."

Delay in Benefit

In the railroad industry, Mr. Dudley stated, "one of the most serious [tax] problems . . . is the long delay in getting the benefit of a tax deduction after making a capital expenditure. Business facilities have to be paid for as they are acquired, but the tax deduction is often spread over as much as 50 years, the so-called expected life of the property. When tax rates and replacement costs are as high as they now are, this presents an almost unsolvable problem to the management." He went on to say that the present amortization allowance, while helpful, "is of too narrow application to give the relief that is needed."

In concluding, Mr. Dudley pointed out that if he were asked to select a change in the tax law which would be most essential to the railroad industry, he would choose "a broad statute permitting, at the taxpayer's election, the deduction over a five year period of the entire cost of a capital item." This "is essential to the fair administration of the revenue laws in any such period of such high rates of taxes as those now prevailing.

"I think the industry should strive for the enactment of such a provision of law."

Tariffs and division sheets—both freight and passenger—came in for abundant consideration from other speakers. W. J. Kelly, vice-president, traffic of the A.A.R., said that there should be available passenger divisions based on the route of travel rather than the complicated bases presently used. Mr. Kelly pointed out that there has been some improvement in freight division sheets, but it is not enough, in his opinion. He attributed this primarily to a shortage of manpower in traffic departments.

C. S. Baxter, head of the railroads' Tariff Research Group, talked briefly on the activities and progress of his group. Mr. Baxter said that the uniform classification is providing the railroads with many simplification opportunities. He predicted that the simplification program will be a huge success.

Speaking on the subject of freight divisions, McC. B. Wilson, auditor of freight receipts of the Atlantic Coast Line, said that more simple divisions, expressed in per cents, are needed. Twenty per cent of the cost of settling interline accounts, Mr. Wilson stated, is on the

first "settlement," while the remaining 80 per cent is for adjusting this first settlement.

After presenting the report of the committee on statistics, P. M. Kelly, comptroller of the Central of New Jersey, spoke on the new "Railway Statistical Manual," soon to be released, and on the Universal Station Code. He explained that in the U.S.C. all stations are being numbered using five digits, while all junction numbers contain four digits. The code, he said, will enable the railroads to interchange punch cards, thereby gaining many economies, and further, will make it possible for them to compile and compare more easily traffic and other statistics broken down by states and rate territories.

Employee Training Programs

R. V. Cole, auditor of disbursements of the Southern Pacific and chairman of the committee on disbursement accounting, following the presentation of his committee's report, delivered an address on employee training programs in disbursement accounting. When considering setting up such programs, Mr. Cole said, there are three points to be taken into account, namely: (1) What does management expect from such programs and what can the management be promised? (2) Is the employee interested in training programs? and (3) Should employees be expected to take such training on their own time?

Answering the first of these questions, Mr. Cole said that management should—and could—expect an increase in production to be the main result. If such a program were set up in a 500-person office, he went on, a minimum saving would be about $18,000 per year. Surveys conducted by his committee revealed that most employees did want to get ahead, and therefore did want the training programs. Furthermore, he concluded, employees should be—and many are—willing to participate in such programs on their own time.

Among the members of the permanent staff of the Interstate Commerce Commission who were present, and who spoke briefly to the accounting officers, were C. W. Emken, director, Bureau of Accounts and Cost Finding; Dr. W. H. S. Stevens, director, Bureau of Transport Economics and Statistics; A. K. Goebel, chief accountant, Bureau of Accounts and Cost Finding; and A. V. Vallandingham, chief accountant, Bureau of Transport Economics and Statistics.

Elmer Hart, comptroller of the Pennsylvania, was elected chairman of the division for the coming year. L. T. Ormond, vice-president of the ACL, became first vice-chairman and C. D. Peet, chief accounting and financial officer of the Missouri Pacific, was elected second vice-chairman.

Letter from a Reader . . .

Should Dispatchers Have More Responsibility?

SEATTLE, WASH.

TO THE EDITOR:

Aside from C.T.C. the only hope, it seems to me, of further reducing the number of train accidents—particularly collisions resulting from man-failure on the road—lies in broadening the jurisdiction and responsibilty of the division and train dispatcher so that he will be encouraged to help forestall the causes for their occurrence.

To accomplish this, the dispatcher must be free to readily adjust his means to the ever-changing conditions confronting him. Today, however, he is handicapped by too many hard-and-fast rules, little changed from those of 60 years ago.

Because the panorama of train movement is continually before him, the train dispatcher is in position to witness the evolution, so to speak, of certain conditions, or emergencies, which can mislead train and enginemen. These situations are referred to in railroad parlance as "traps." For example: a first-class train was given an order to meet a second-class train at X. However, another second-class train—no mention of which was made in the order—made station X on its time card rights and was on the siding when the opposing first-class train showed up. The second-class train cited in the order had not yet arrived. Mistaking the train on the siding for the one to be met there, the first-class train proceded, without stopping, and collided with the opposing second-class train a mile or two beyond the meeting point established by train order.

Yes, the trainmen and enginemen on the first-class train were responsible for this accident for not noting that the number of the engine on the train on the siding did not correspond with the number of the engine on the train they had orders to meet at X. Moreover, positive identification was possible through inquiry of the crew of train on siding. A lapse such as this seems, on its face, to be inexcusable. It is simply a case of men being momentarily off guard.

But a dipatcher is in position to witness the very evolution of this "trap." I believe that when he shoulders the responsibility for such "accidents" as this, they will be all but entirely eliminated. In a sense train and enginemen proceed in the dark, their minds being centered on the movement of their own train, and hence, are susceptible to momentary lapses. Similar "accidents" grow out of a number of other oversights on the part of the train and enginemen, practically all of which could be forestalled by the dispatcher carrying his full load.

It may be argued that this overall supervision by the dispatcher will cause the train and enginemen to lean on him to such an extent that final results will be disappointing. This is a mere excuse, and is not borne out by practical experience. It is, after all, a cooperative effort which will have the effect of bringing managements and operatives into an alliance which will sustain a permanent and growing interest in successful operation generally. As a partial compensation for the dispatchers incident to their taking on additional responsibility, a substantial reward of, say $15 to $20 thousand could be set up for those who come through for lengthy periods with clear records—i.e. without a single collision on their district while said dispatcher was on duty. Certainly, securing thus the complete cooperation of the train dispatcher is well worth deep consideration on part of managements from the very top, down.

W. C. MORSE

[The writer of this letter, now in his 86th year and retired, was a train dispatcher on the Missiouri Pacific (St. Louis, Iron Mountain & Southern) when he was 20. He was later a superintendent on this portion of the M.P. From 1920 to 1925 he was vice-president and general manager of the Louisiana Railway & Navigation Co. (now L. & A.) Later a serious back injury forced him to retire from railroading.

Mr. Morse is not new to the columns of this paper. About 1914, during his tenure with the M.P., he wrote a series of articles, inspired by a flurry of disastrous train collisions caused largely by inadequate supervision, in which he recommended courses of action to tighten up supervisory controls. —Editor]

Freight Car Loadings

Loadings of revenue freight in the week ended June 14 totaled 631,043 cars, the Association of American Railroads announced on June 19. This was a decrease of 53,200 cars, or 7.8 per cent, compared with the previous week; a decrease of 195,840 cars, or 23.7 per cent, compared with the corresponding week last year; and a decrease of 174,833 cars, or 21.7 per cent, compared with the equivalent 1950 week.

Loadings of revenue freight for the week ended June 7 totaled 684,243 cars; the summary for that week, compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS

For the week ended Saturday, June 7

District	1952	1951	1950
Eastern	114,597	141,056	142,567
Allegheny	126,579	172,123	163,570
Pocahontas	50,814	60,040	60,303
Southern	121,712	125,813	121,726
Northwestern	99,068	136,485	129,483
Central Western	112,441	119,031	123,019
Southwestern	59,032	58,778	55,373
Total Western Districts	270,541	314,294	307,875
Total All Roads	684,243	813,326	796,041
Commodities:			
Grain and grain products	44,582	43,075	44,257
Livestock	6,974	6,924	7,241
Coal	114,485	137,516	145,679
Coke	8,583	16,201	14,368
Forest products	44,809	50,075	45,263
Ore	56,448	93,129	81,083
Merchandise l.c.l	70,423	75,310	82,996
Miscellaneous	337,939	391,096	375,154
June 7	684,243	813,326	796,041
May 31	697,026	744,655	709,896
May 24	761,647	811,799	780,926
May 17	754,373	809,475	743,313
May 10	719,793	808,127	711,789
Cumulative total 23 weeks	16,612,042	17,436,873	15,485,393

In Canada.—Car loadings for the seven-day period ended June 7 totaled 83,391 cars, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada: June 7, 1952	83,391	30,812
Cumulative Totals June 7, 1952	1,747,090	792,272

Canadian Roads Faced With New Wage Demands

Union leaders representing about 125,000 Canadian railroad employees met last week to set wage demands for presentation to the railways.

The unions' proposals will probably be given the railways about July 2, and are likely to touch off Canada's biggest set of labor-management negotiations since the wage-hour dispute that culminated in the general rail strike of 1950.

In the union talks opened at Montreal, a dozen international brotherhoods and two all-Canadian unions will get together on a set of demands covering non-operating employees.

Operating employees are negotiating individually with the railways—their contracts have different expiration dates—and settlements have been worked out in some cases.

The non-operating employees will be seeking concessions for new contracts to replace two-year agreements that run out next September. Those contracts became effective under the arbitration award of Justice R. L. Kellock of the Supreme Court of Canada after Parliament had legislated an end to the 11-day strike of August 1950. Under them, most of the rail workers got a 40-hour work week without loss of pay, plus a seven-cents-an-hour straight increase.

Since the 1950 agreements went into effect, union leaders contend, the cost-of-living index has advanced to an extent equal to about another 20 cents an hour, even allowing for recent drops in the index. The initial wage demand is certain to be at least that amount, and some estimates are that it will run as high as 35 cents an hour.

Also expected to come in for attention in this round of negotiations is the union shop. The rail unions are expected to call for all rail workers to be compelled to join the appropriate union for their job category. Another proposal may be the check-off of union dues.

New Accounts Proposed For Motor Bus Operators

The Interstate Commerce Commission's Bureau of Accounts and Cost Finding has issued a proposed revision of the uniform system of accounts for Class I motor carriers of passengers. The proposed new system would replace the one in effect since January 1, 1938. Interested parties have until August 15 to make representations with respect to the new proposals.

1951 Net of Forwarders Was 22 Per Cent Under '50

Large freight forwarders reported for 1951 a composite net income of $3,394,023, a decrease of 21.8 per cent below their 1950 net of $4,338,584. The "large" forwarders are those with annual revenues of $100,000 or more.

Their 1951 earnings, compiled by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission from last year's quarterly returns, were reported by the bureau in the latest issue of its "Monthly Comment."

The forwarders' 1951 gross, at $333.9 million, was up 16.9 per cent from 1950, but they paid the carriers 17 per cent more for transportation services—$255.5 million as compared with $218.4 million. The 1951 payments to the railroads totaled $177.2 million, an increase of 17.6 per cent above the 1950 payments of $150.8 million. Meanwhile, payments for line-haul trucking services went up 22.6 per cent — from $34.4 million to $42.2 million. The $1.8 million paid to water carriers in 1951 was 27.7 per cent less than the comparable 1950 figure of $2.5 million.

Freight received from shippers in 1951 totaled 4.8 million tons, while the number of shipments totaled 20.5 million. The respective 1950 figures were 4.3 million tons and 19.6 million shipments.

International Model RR Meet to Be in England

The First International Model Railroad Meet will be held in York, England, next October 10, 11, 12 and 13. A bus tour of England and Scotland—which can be extended or condensed to cover any period from 14 to 21 days, with an extended stopover in Kent—has been arranged for visitors to the meet. A free 15-page, illustrated booklet giving full information on the trip may be obtained from William K. Walthers, travel representative, International Railroad Modelers Assembly, 241 East Erie street, Milwaukee 2, Wis.

Amortization Certificates

Certificates of necessity for accelerated tax amortization of facilities were granted to 14 railroads during the period from May 23 through May 29, the Defense Production Administration has announced.

The Denver & Rio Grande Western, which received the largest certificate in the group, was authorized to write off in five years 55 per cent of facilities costing $6,151,187. Other certificates went to the roads listed below. The percentage figure in each case indicates the amount that can be written off in five years.

Atlantic & North Carolina, $243,404, 55 per cent.

Bauxite & Northern, $122,325, 40 per cent.

Charleston & Western Carolina, $88,858, 40 per cent.

Chesapeake & Ohio, $228,000, 40 per cent.

Chicago, Milwaukee, St. Paul & Pacific, $1,065,000, 40 per cent.

Chicago, St. Paul, Minneapolis & Omaha, $1,258,638, 55 per cent.

Illinois Terminal, $1,911,305, 70 per cent.

LaSalle & Bureau County, $90,000, 55 per cent.

Missouri Pacific, $3,330,000, 70 per cent.

Pittsburgh & Lake Erie, $464,000, 55 per cent.

Reading, $1,361,414, 40 per cent.

South Buffalo, $502,000, 40 per cent.

Southern Pacific, $117,650, 40 per cent.

Another recent statement issued by D.P.A. summarized by industries the certificate situation through April 15 of this year. It showed that line-haul

railroads, as of that date, had received 521 certificates authorizing fast write-off of 65.4 per cent of $1,412,146,000 spent for new equipment and facilities. Those same roads, as of April 25, had 572 applications pending for accelerated amortization authority with respect to proposed expenditures of $645,917,000.

Meanwhile, switching and terminal roads had received 30 certificates authorizing fast write-off of 52.1 per cent of $15,419,000. And they had pending 11 applications involving proposed expenditures of $7,089,000.

GTW Coaches to Use New Type Heating

Five coaches to be built for the Grand Trunk Western lines of the Canadian National by the Pullman-Standard Car Manufacturing Company (*Railway Age*, March 24, page 56), are said to be the first new cars in North America which will feature electronically controlled heating systems.

The Minneapolis-Honeywell Regulator Company has announced that its electronic-type heating system will be installed in the cars, which are scheduled for 1953 delivery. The system utilizes hot water containing anti-freeze and is automatically controlled by electronic thermostats.

Although the CNR installation is said to be the first to be made in new cars, the system is in use on one or more existing cars of 18 American railroads.

New "Op" Union Wins Western Pacific Election

The United Railroad Operating Crafts has supplanted the Brotherhood of Railroad Trainmen as collective-bargaining representative of road brakemen employed by the Western Pacific. In a recent election, results of which have been certified by the National Mediation Board, United defeated the B.R.T. by one vote—157 to 156.

Meanwhile, United lost two other recent WP elections whereby it sought to displace the Brotherhood of Locomotive Engineers and Brotherhood of Locomotive Firemen & Enginemen as representatives, respectively, of engine men and firemen. The B.L.E. retained its representation rights by a vote of 136 to 81, while the B.L.F.E. won by a vote of 167 to 137.

First High School RR Course Is Completed

The Sumter County Vocational School in Wildwood, Fla., recently completed its first season of instruction in railroading for high school students, said to be the first undertaking of its kind in the country. The course of instruction, begun last fall, consisted of two subjects: Railway telegraphy and railway agency accounting.

According to Thomas D. Bailey, superintendent of the Florida State Department of Education, the Wildwood High School is the first in the United States in which credits for railway vocational subjects are given toward graduation and are acceptable for college entrance requirements. The courses were offered as electives and the Seaboard Air Line supplied the building and necessary equipment. The four teachers of railway subjects are SAL employees.

The school also held night classes for adults employed by the Seaboard who wished to increase their knowledge and earning capacity and also for employed persons in other businesses who were interested in obtaining railway positions after acquiring the necessary training.

The State Department of Education became so interested in the experiment that it appointed a co-ordinator of railway training, who has received numerous requests for information from out-of-state sources. He predicts for next year the enrollment in the school of numerous students from distant Florida points, as well as from other states.

No Death from Rail Handling of Explosives in '51

Railroads of the United States and Canada moved a new high record of commercial explosives as well as great quantities of military explosives in 1951 without loss of life, according to the annual report of the Bureau for the Safe Transportation of Explosives and Other Dangerous Articles of the Association of American Railroads.

"During 1951," the report said, "there were no deaths or injuries chargeable

CELEBRATING THE FIFTIETH ANNIVERSARY of de luxe overnight service between New York and Chicago, the Pennsylvania sponsored special ceremonies in both cities prior to the June 15 departure of its present "Broadway Limited" (*Railway Age*, June 16, page 82). In New York, on the platform adjacent to Track 11 of the Pennsylvania Station (right), James M. Symes, executive vice-president of the PRR, addressed a special gathering of passengers and crew members who rode the original trip of the "Broadway's" predecessor, the "Pennsylvania Special." At Chicago (below)) the "Broadway Limited" began its June 15 run by crashing through a giant gold paper barricade emblematic of its second half century of fast passenger service. Mayors of both New York and Chicago participated in the ceremonies in their respective cities, while retired PRR employees who fired the steam locomotives of 1902 were honorary enginemen on the diesel-powered anniversary run from Chicago as far as Fort Wayne, where special festivities were also scheduled.

to the rail transportation of commercial explosives, a performance record which has now been maintained for thirty consecutive years.

"From available information, consumption of commercial explosives in the United States and Canada during 1951 was slightly more than 827,000,000 pounds. This production established a new all-time high for the industry and is about 170% of the output of ten years ago."

The only injury chargeable to the rail transportation of explosives resulted from the discharge of a rifle which had been checked as baggage in a foot locker and which exploded, injuring an employee.

Railroads in 1951 also moved large shipments of dangerous articles other than explosives. These included among other things, acids of different kinds, electric storage batteries, benzine, chemicals, compounds of different kinds, compressed gas, matches, various kinds of oil, gasoline, phosphorous and poisonous liquids. The only fatality resulting from the transportation of such articles resulted from the explosion and fire of a car loaded with gasoline which caused the death of a railway employee.

Finance-Case Applicants Get Job of Notifying States

The Interstate Commerce Commission has modified, effective July 1, its regulations covering the filing of finance-docket applications relating to issuance of securities and abandonments or acquisitions of lines. The modifications will require applicants to serve notice of the filing of applications on governors and utility commissions of interested states. Heretofore, this service job has been done by the commission.

Railroads, Post Office Would Change Mail-Pay Formula

The railroads and the Post Office Department have asked the Interstate Commerce Commission to approve an "alternative method" for computing terminal charges on the movement of mail. In a joint petition filed last week, they said "serious difficulties" have been encountered in placing in effect the system of terminal charges prescribed in the 1951 mail-pay decision. Many railroads have not received payments for the period from January 1, 1951, they added.

The proposed alternative method would permit individual railroads to apply an average rate per foot to the volume of mail handled in any given period. This average rate would be derived from a study of terminal services performed during a mutually-agreed test period. The rate would be calculated to produce compensation for terminal services equivalent to that which would be derived from the rates and charges prescribed in the mail-pay case. (*Railway Age*, November 26, 1951, page 13.)

This alternative method would cover the period from January 1, 1951, through June 30, 1952. On July 1 the railroads and post office expect to file a petition with the I.C.C. requesting establishment of an average rate per foot for application to terminal services of all mail-carrying railroads. This rate would apply from July 1 forward.

THE "PENNSY" MAKES ITS DEBUT

Volume 1, Number 1, of the "Pennsy," new employee magazine just established by the Pennsylvania, is being distributed to the homes of the railroad's 130,000 active employees, its 29,000 retired employees and its 8,600 men in the armed services throughout the world.

The new magazine, according to a special foreword by PRR President Walter S. Franklin, is to "help us get better acquainted with one another and have a wider knowledge of subjects of mutual concern. It is the aim to make the 'Pennsy' a complete magazine of railroading as we on the Pennsylvania know it, to give accounts of the things you are entitled to know about—how the railroad is operated and financed, how we get and spend our revenue, how regulation affects us, and how through taxation and federal and state subsidies we are, in effect, compelled to help finance competition. In short, the 'Pennsy' will give you the 'inside' as well as the 'outside' of our company."

The first issue of the magazine is dated June; it consists of 24 pages plus cover; is 9 inches by 12 inches in size; and makes liberal use of illustrations and of color. Among the more prominent articles is one on the old Broad Street Station in Philadelphia; one on the new New York-Washington "Congressional"; and one on the railroad's new maintenance-of-way safety film, "Not By Chance."

Department of Agriculture Issues Grain-Trucking Study

A study of "The Transportation and Handling of Grain by Motor Truck in the Southwest" has been issued by the Production and Marketing Administration of the United States Department of Agriculture. It was made by William J. Hudson, transportation economist, and Earl K. Henschen, statistical analyst, of the administration's Marketing and Facilities Research Branch.

The study covered the transportation and methods of handling grain by truck in the states of New Mexico, Oklahoma, and Texas. Data for it were collected from 117 business concerns handling an estimated 30 to 35 per cent of the grain grown in the area. A summary, highlighting results of the study, read in part as follows:

"The data indicated that 77 per cent of the respondents used motor trucks along with railroad facilities for shipping and receiving grain. None of them used trucks exclusively . . . but 23 per cent stated that all their transportation was provided by the railroads. Analysis of the data by type of business indicated that 71 per cent of country elevators, 69.2 per cent of terminal elevators, 100 per cent of flour mills, and 91.7 per cent of feed mills used trucks to some extent . . . in 1950.

"Although 90 of the 117 concerns stated that they used motor trucks in the conduct of their business, only 77 of them indicated the proportion of the total amount of grain handled on an annual basis that was trucked. The percentage distribution of total trucked grain by type of business operation was: Country elevators, 33; terminal elevators, 24.1; flour mills, 26.7 per cent; and feed mills, 16.2 . . .

"Evaluation of truck operating costs indicated that typical specialized commodity carrier costs were about 17.5 to 18 cents per vehicle mile. . . . Truck rates for grain were found to be relatively unstable. . . . Generally [they were] substantially lower than rail rates between identical points of origin and destination, in some cases as much as 50 per cent lower. . . .

"Shippers' reasons for diversion of business from railroads to motor trucks in order of importance were: (a) Lower rate, (b) better service, (c) box car shortage, (d) lower handling costs, and (e) to increase the volume of grain shipped.

"Principal shipper objections to the trucking of grain were: (a) Unethical business practices, (b) disruption of existing marketing channels, and (c) lack of transit privilege."

NYC Conductors Stick with O.R.C.

The Order of Railway Conductors will continue as collective-bargaining representative of the New York Central's road conductors, according to results of a recent election, which has been certified by the National Mediation Board. The O.R.C. defeated the Brotherhood of Railroad Trainmen by a vote of 1,247 to 898.

U. S. Issues Invitations For 1953 Railway Congress

Latin American countries have been invited by the United States government to send delegates to the Eighth Pan-American Railway Congress to be held in this country in June of 1953, it was announced June 16 at a meeting in Washington, D. C., of the United States National Commission in the Pan-American Railway Congress Association.

In the letter of invitation addressed to the heads of 20 countries, the Department of State said that the congress will convene in Washington next year from June 12 to 20 and in Atlantic City, N. J., from June 21 to 25. The congress is being sponsored by the government, which is a member of the organization.

Joaquin Nunez Brian, of Buenos Aires, secretary general of the Permanent Commission of the Pan-American Railway Congress Association, was

present at the Washington meeting of the U. S. commission, and declared that the Latin American countries regard next year's congress as "of great importance and utility to them."

It was also announced that the Department of State has added three members to the Organizing Committee of the Congress. They are C. W. Floyd Coffin, president of the Railway Supply Manufacturers Association and vice-president of the Franklin Railway Supply Company; Norman C. Naylor, president of the Union Asbestos & Rubber Co., and J. Thomas Schneider, assistant secretary of commerce for international affairs.

The U. S. commission was informed that a tentative program of business sessions of the congress has been prepared, and this includes eight section meetings and four or five plenary sessions. It is expected that approximately 300 technical papers on railroads and railroading will be presented for consideration.

William T. Faricy, chairman of the commission and president of the Association of American Railroads, presided at the meeting.

LV Opens New Passenger Facilities in Buffalo

The Lehigh Valley's new passenger facilities at Washington and Scott streets, Buffalo, N. Y., were placed in service on June 17. A new waiting room, ticket office and baggage facilities have been installed in the Scott Street station, which now also houses divisional operating and passenger traffic offices.

Army Will Decentralize Traffic Control Section

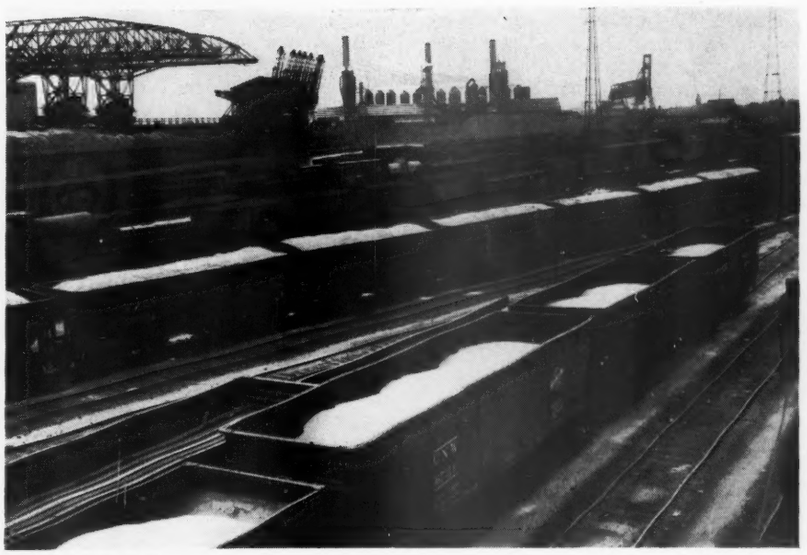
The Department of the Army has announced it will decentralize the Traffic Control Section of the Transportation Corps. Beginning August 1, regional offices will be established at St. Louis, Mo., Pittsburgh, Pa., Memphis, Tenn., and Salt Lake City, Utah. The tank car section will go to St. Louis.

Establishment of these zone offices reflects increased emphasis on improvement in military traffic management, the army said. The offices will control routing of the army's domestic freight traffic. The army said this move was prompted in part by its policy to eliminate concentration of activities in Washington, D. C.

June 1 Locomotive Order Backlog Was 1,375 Units

New locomotives on order by Class I railroads on June 1 totaled 1,375, the Association of American Railroads has announced. This order backlog consisted of 1,347 diesel-electric locomotives and 28 steam.

On June 1 a year ago Class I roads had 1,839 new locomotives on order, of which 1,820 were diesel-electrics, 16 steam and three electric.



United Press Telephoto

AWAITING STEEL PEACE are many cars loaded with limestone, coal and steel scrap; a few of these are shown here, at the U. S. Steel works at South Chicago, Ill. Initial effects of the strike on railroad employment were confined largely to operating and shop personnel of roads directly serving the steel industry, but there may be further employment repercussions among railroad forces if steel production is not soon resumed.

In the first five months of 1952, Class I roads installed in service, 1,149 new locomotives, the A.A.R. said. All of these were diesel-electric with the exception of six steam and one electric. Locomotives placed in service in the same five-month period of last year totaled 1,055. Of this number, 1,048 were diesel-electric, six steam and one electric.

In May 1952, the roads placed 266 new locomotives in service, all of which were diesel-electric except two steam. In May last year, 217 locomotives were installed, of which two were steam, one electric and the remainder diesel-electric.

Waybill Studies

The Bureau of Transport Economics and Statistics, Interstate Commerce Commission, has issued the following waybill study: Statement No. 5218, Distribution of Petroleum Products by Petroleum Administration Districts — Fourth Quarter of 1951.

Two-Day B. of L.E. Strike Cripples Long Island

A working-rules agreement reached by representatives of the Long Island and the Brotherhood of Locomotive Engineers at 5 p.m. on June 17 ended a strike which had completely halted the road's operations since 4 a.m. on June 16. The first post-strike train was a two-car special that left Jamaica, N. Y., for Flatbush avenue, Brooklyn, at 7:30 p.m. on June 17.

The B. of L.E. had sought to block application to the LI of rules changes embodied in the national railroad settlement at the White House on May 23. Wages were not an issue in the LI dispute. Under terms of the strike-ending agreement, new rules applicable to the LI will be written by a two-man committee, one member of which will be appointed by William Wyer, the road's trustee, and the other by the union.

Diesel Training for Operating Officers

A training program designed to familiarize operating department supervisory officers with details of diesel locomotive operation has been launched by the Erie.

According to Milton G. McInnes,

CAR SURPLUSES, SHORTAGES

Average daily freight car surpluses and shortages for the week ended June 14 were announced by the Association of American Railroads on June 19 as follows:

	Surplus	Shortage
Plain Box	20,552	737
Auto Box	172	0
Total Box	20,724	737
Gondola	4,850	277
Hopper	2,116	309
Covered Hopper	3	17
Stock	2,508	0
Flat	12	340
Refrigerator	7,124	7
Other	364	9
	37,701	1,696

vice-president—operations and maintenance, the course is being given to general managers, their assistants, division superintendents, train dispatchers, yardmasters, car foremen, wreck-masters and storekeepers. It covers locomotive fundamentals, electrical circuits, steam generators and related equipment. Six three-hour sessions are being given in the road's diesel training car at selected division points.

A previous training course was given to enginemen, firemen, electricians, machinists, shopmen and others having direct contact with diesel locomotives.

C. N. Wesley Honored By Trinity College

Clarence N. Wesley, executive vice-president and treasurer of the Standard Railway Equipment Manufacturing Company, was awarded an honorary degree of master of arts at the recent 126th annual commencement exercises of Trinity College, Hartford, Conn.

Cotton Belt to Issue 75th Anniversary Cachet

To commenorate its 75th anniversary, the St. Louis Southwestern will sponsor a special cachet, printed in blue on white envelopes, on October 1. The cachet will be postmarked at Tyler, Tex., where, on October 1, 1877, the Tyler Tap Railroad, first link in the present Cotton Belt, began operation.

Applications for the cachet, containing the name and complete address of the recipient, and accompanied by a three-cent stamp for each cachet, should be made not later than September 1 to the Cotton Belt's public relations department, 619 Cotton Belt building, St. Louis 2.

SIRT Ordered to Continue Passenger Service

The New York Public Service Commission has ordered the Staten Island Rapid Transit to continue to provide passenger service on the present basis until next September 13.

The continuation was ordered to give the commission time to hold hearings on the railroad's request to discontinue all its passenger service as of July 7 (*Railway Age*, June 9, page 15).

Overnight Albany-New York Motorship Service Opened

An overnight motorship service for transporting truck trailers loaded with low-tariff slow freight was opened recently between New York City and Albany.

The service is operated by the American & Overseas Chartering Corp., which has purchased the two ships used in the service and all stock of Trailerships, Inc., which briefly operated a similar service in 1947. Solicitation of business from trucking companies, as well as operation of the Albany terminal, is handled by the Trailer Terminal Corporation. The fee is $50 for any trailer up to 32 ft. long and the trip takes 10 hours between terminals. The Coast Guard, it was reported, has guaranteed to keep the Hudson river open during the winter.

N&W and B&M Announce New Low Summer Fares

The Norfolk & Western has announced greatly reduced summer round-trip fares, effective June 25, for group and family travel. The new fares are generally similar to those previously announced by 14 major eastern railroads (*Railway Age*, June 16, page 12).

The new group fare will be 25 per cent less than normal round-trip coach fares for parties of three or more adults, or the equivalent in childrens' regular half-fares. The family-plan fare will permit children under 12 to travel free when accompanied by a parent riding on a round-trip coach ticket costing $3.45 or more, and grants half fare to children between 12 and 15. Thirty-day return limit tickets will be good on all trains and between most stations on the N&W. In addition, the new fares will be available to most points in Eastern traffic territory.

Special low-rate summer excursions to various places in New England have been announced by the Boston & Maine. The excursions include one- and two-day trips with an all-expense price, including transportation, hotel room and meals.

I.C.C. Bureau Issues Study Of New Waybill Series

The first of a series of table-and-chart studies showing state-to-state distribution of 1950's carload tonnage by major commodity groups has been issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. It is statement No. 5216, and it covers the Middle Atlantic group of states, i.e., New York, New Jersey, and Pennsylvania.

1951's Average Plane Load Was Near Rail-Coach Load

Scheduled domestic air lines averaged 26 revenue passengers per plane-mile in 1951, when the Class I railroads averaged 26.8 revenue passengers per coach-mile. The railroads' average per sleeping- or parlor-car mile was 11.7 passengers, while their composite average for all passenger-carrying cars was 19.4 passengers.

These data, and like figures for buses, were given for the years 1939 through 1951 in the latest "Monthly Comment" of the Interstate Commerce Commission's Bureau of Transport Economics and Statistics. The 1951 figure for buses was a preliminary estimate indicating that the average bus load last year was 18.7 passengers per vehicle-mile.

Back in the war year of 1944, railroad coaches carried 41 passengers per coach mile, while the composite average for all railroad passenger cars was 31.9 passengers. Last year, however, was better than 1950, for which the respective loads were 25.2 passengers and 18.2 passengers.

The 1951 average for the air lines was higher than that of any other year shown. In that connection, however, the bureau noted that the size of planes has been increasing. So it calculated the air lines' load factor, i.e., the ratio of revenue passenger-miles to seat-miles. The 1951 ratio was 67.9, as compared with 1950's 61.3 and a 1944 peak of 89.4.

April Accidents

The Interstate Commerce Commission has made public its Bureau of Transport Economics and Statistics' preliminary summary of "steam railway" accidents for April, and the first four months of the year. The compilation, subject to revision, follows:

	Month of April		4 months ended with April	
Items	1952	1951	1952	1951
Number of train accidents*	752	814	3,396	3,811
Number of accidents resulting in casualties	40	43	203	200
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed	88	84	256	261
Injured	69	107	263	272
Passengers on trains:				
(a) In train accidents*				
Killed	..	..	..	85
Injured	15	12	79	776
(b) In train-service accidents				
Killed	1	3	1	5
Injured	151	150	565	529
Travelers not on trains:				
Killed	3	..	7	1
Injured	45	49	227	250
Employees on duty:				
Killed	31	26	121	129
Injured	1,509	1,706	6,883	7,879
All other nontrespassers:**				
Killed	98	134	557	593
Injured	406	448	2,022	2,213
Total — all classes of persons:				
Killed	221	247	942	1,074
Injured	2,195	2,472	10,039	11,919

* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of $300 or more to railway property in 1951. Beginning January 1, 1952, this minimum was raised to $325. Only a minor part of the total accidents result in casualties to persons, as noted above.

** Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and nontrespassers, were as follows:

Persons:				
Killed	89	125	517	555
Injured	257	297	1,402	1,543

B&O Opens New Tunnel In West Virginia

The Baltimore & Ohio opened its new $4,000,000 tunnel through the West Virginia mountains, near Clarksburg, on June 16. The new double-track tunnel, on the main line between the Atlantic seaboard and Cincinnati and St. Louis, replaced an old structure built in 1853 which had room for only

one track. Two reverse curves that fed traffic through the old tunnel have been eliminated. The right-of-way of the new tunnel, which is 3,300 feet long, 31 feet wide and 28 feet high, will be integrated into the centralized traffic control system recently installed on the main line between Grafton and Parkersburg, one of the most heavily traveled sections on the B&O system.

CAR SERVICE

The I.C.C. has set back the expiration dates of four service orders (originally scheduled to expire June 16), which it issued to meet conditions arising as a result of the strike in the steel industry. The new expiration date is June 30 for three of the orders. Two of these are Nos. 884 and 885, which provide for permit systems whereby railroads can get authority to load cars with ex-lake iron ore and import iron ore, holding such cars free of demurrage. The third is No. 886, which suspended Agent L. C. Schuldt's demurrage tariff, insofar as it applied to lake-cargo coal. The fourth extension was effected by issuance of No. 865-C, which suspended until July 1 the provisions of No. 865 that impose penalty demurrage charges on gondola and flat cars.

ORGANIZATIONS

The **Railroad Enthusiasts, Inc.,** New York division, will hold their next meeting on June 25, at 8 p.m., in Grand Central Terminal, Room 5928. W. G. Whitsett, assistant to vice-president, traffic, of the Louisville & Nashville, will speak on "Living a Fast Life Across 13 States with Ellen N."

The **Traffic Club of Denver** will hold its annual Colorado Transportation Day celebration on August 21. Golf at the Cherry Hills Country Club or a bus trip to the mountains is on the program for the morning and a cocktail party and dinner at the Shirley Savoy Hotel is scheduled for the evening. Requests for reservations should be sent to L. W. Houseman, 216 Denham building, Denver, Colo.

F. R. Dickenson, president of the Townsend Company, New Brighton, Pa., has been elected vice-president of the **Industrial Fasteners Institute.**

The **Traffic Club of St. Louis** installed the following new officers at its 28th annual dinner on June 3: President, James D. Logan, general freight agent, Acme Fast Freight, Inc.; first vice-president, W. J. Edmonds, general traffic manager, Granite City Steel Company; second vice-president, L. M. Dean, traffic manager, Husmann & Roper Freight Lines, Inc.; third vice-president, L. V. Gudiswitz, traffic manager, Graham Paper Company; fourth vice-president, C. W. Brandenburg, general agent, Chesapeake & Ohio; fifth vice-president, Hugo Waninger, general traffic manager, Anheuser Busch, Inc.; and secretary-treasurer, R. P. Yellen, general agent, Norfolk & Western.

EQUIPMENT AND SUPPLIES

LOCOMOTIVES

The **Bessemer & Lake Erie** has ordered 25 diesel-electric locomotive units at an estimated cost of $4,750,000. The Electro-Motive Division of General Motors Corporation is supplying 10 "A" and eight "B" 1,500-hp. road units (deliveries of which are now being made), and three 1,500-hp. road-switching units, scheduled for delivery next September. Two 1,600-hp. switching units were ordered from the Baldwin-Lima-Hamilton Corporation and two 1,000-hp. switching units from the American Locomotive-General Electric Companies, all for delivery next month.

The **Central of Georgia** has ordered 15 1,600-hp. road-switching diesel-electric locomotive units from the American Locomotive-General Electric Companies at an approximate cost of $2,300,000 (including foreign line freight charges). Delivery is scheduled for next August.

The **Chesapeake & Ohio** has ordered from the Electro-Motive Division of General Motors Corporation 43 diesel-electric locomotive units as follows: Four 4,500-hp. freight locomotives, each consisting of three 1,500-hp. units, for delivery in November; two 1,200-hp. yard switchers for delivery in January 1953; and 29 1,500-hp. road-switchers, of which 18 are scheduled for delivery in January 1953 and 11 in February 1953. The four road freight locomotives will cost $503,600 each; and the yard switchers will cost $105,900 each. Of the road-switchers 24 will cost $162,665 each; three will cost $153,325 each, and the remaining two will cost $152,460 each.

The **Chicago, Burlington & Quincy** has ordered 31 diesel-electric locomotive units from the Electro-Motive Division of General Motors Corporation, consisting of 6 2,250-hp. passenger locomotives, 17 1,500-hp. and four 3,000-hp. road-switching locomotives. Delivery of the units, which will cost approximately $5,800,000, is expected the latter part of this year.

The **Great Northern** has ordered one 3,000-hp. F-7 locomotive consisting of one "A" and one booster unit from the Electro-Motive Division of General Motors Corporation, at an estimated cost of $335,000. Delivery is expected late in August.

The **New York, Chicago & St. Louis** has ordered 25 diesel-electric locomotive units at a cost of $2,972,500. Ten 1,500-hp. road-switchers will be built by the Electro-Motive Division of General Motors Corporation; ten 1,000-hp. yard-switchers by the American Locomotive-General Electric Companies; and five 1,200-hp. yard-switchers by Fairbanks, Morse & Co.

The **St. Louis Southwestern** has ordered 12 diesel-electric locomotive units at an estimated cost of $1,281,000. The American Locomotive-General Electric Companies will build eight 1,600-hp. road-switching units (seven for freight service and one for passenger service), for delivery next October, and the Electro-Motive Division of General Motors Corporation will construct four 1,500-hp. "A" freight units for September delivery.

The **Seaboard Air Line** has ordered 60 diesel-electric locomotive units costing $9,000,000. Orders were placed as follows: Electro-Motive Division of General Motors Corporation — Five 2,250-hp. "A" passenger units for delivery next December, and 25 1,500-hp. freight-service road-switching units for delivery during the fall; American Locomotive-General Electric Companies —10 1,600-hp. road-switching units (five of which are to be equipped for passenger service), and 10 1,000-hp. yard-switching units, all for delivery during the fall and through January 1953; Baldwin-Lima-Hamilton Corporation—10 1,200-hp. switching units for delivery during the last quarter of 1952.

SIGNALING

The **Delaware & Hudson** has ordered equipment from the General Railway Signal Company for installation of an all-relay interlocking at Hudson, Pa.

The **Norfolk & Western** has ordered from the Union Switch & Signal Division of Westinghouse Air Brake Company material to install C.T.C. on approximately 16 miles of double track between Lick Branch, W. Va., and North Fork. The style C control machine, now located at Eckman yard, will be moved to Bluefield, W. Va. (Pocahontas division headquarters), and necessary controls will be added to the machine to handle the new Lick Branch-North Fork installation. In addition to code and carrier equipment, the order includes styles PL-3 position light signals, A-21 dual-control electropneumatic switch machines, SL-21A electric switch locks, relays, rectifiers, transformers and housings. Field installation will be handled by railroad forces.

SUPPLY TRADE

Robert M. Covert has been appointed eastern district sales manager—railroad sales, for the **Union Asbestos & Rubber Co.,** with headquarters in New York. He is the former district sales manager at Chicago, where he covered Chicago and the north midwest.

J. S. Thompson, formerly general sales manager of the **Townsend Company,** New Brighton, Pa., has been appointed to the newly created position of vice-president. **H. E. Chilcoat,** formerly assistant general sales manager, has been appointed general sales manager.

The **Koehring Company** has announced organization of another subsidiary company — the **Koehring Southern Company**—to provide increased facilities for development and manufacture of new models of Koehring power shovels and cranes. Koehring Southern has purchased the Chattanooga, Tenn., plant of the Norge division of the Borg-Warner Corporation for about $500,000. Koehring Southern plans to spend approximately $1,000,000 for machine tools to equip the building for new-product manufacture.

The **Westinghouse Electric Corporation** has announced plans to build a multi-million dollar industrial and commercial lighting equipment plant in Vicksburg, Miss. The company hopes construction will get under way in August, making occupancy possible by early fall of 1953.

John W. Lohnes, vice-president of sales for the **Speer Carbon Company** and the International Graphite and Electrode division, has been appointed also vice-president of sales for the Jeffers Electronics and Speer Resistor divisions. The new appointment makes him vice-president of sales for the entire company. Mr. Lohnes joined Speer in 1947.

The **Johns-Manville Corporation** has announced a major expansion of its Watson, Cal., plant. Completion of the new building, enclosing approximately 100,000 sq. ft. of floor space, is expected in the early fall of 1953.

Howard F. Park, Jr., has been appointed manager of sales for the **General Steel Castings Corporation,** with headquarters at Granite City, Ill., and **Lawrence P. White** has been appointed district manager—sales, at the eastern district sales office at Eddystone, Pa., succeeding Mr. Park.

W. A. Beauchamp, mechanical engineer for the **Camel Sales Company,** has been elected vice-president, engineering and research. **Gabriel Madland** succeeds Mr. Beauchamp as mechanical engineer.

W. J. Burrows has joined the **Vapor Car Heating Company, Ltd.,** of Montreal. He formerly was with the Canadian National in its electrical and diesel engineering department. **L. D. Hassal** has been transferred from Montreal to Calgary, Alta., to be in charge of Vapor Car Heating service for railroads in that area.

OBITUARY

William Walton Ford, district sales manager for the Youngstown Sheet & Tube Co. at Atlanta, Ga., for the past 24 years, died on June 11, in an Atlanta hospital.

FINANCIAL

Alabama, Tennessee & Northern.—*New Director.*—Marvin Mostellar, president of the Gulf Coast Marine Supply Company and of the Moala Real Estate Corporation, both of Mobile, Ala., has been elected a director of this subsidiary of the St. Louis-San Francisco.

Chicago, Rock Island & Pacific.—*Control of Peoria & Bureau Valley.*—Division 4 of the I.C.C. has authorized the CRI&P to acquire another 2,000 shares of P&BV capital stock. The Rock Island already owns 7,909 of the 15,000 outstanding shares. It operates the P&BV property under perpetual lease (*Railway Age*, December 16, 1950, page 66).

Colorado & Southern.—*Simplified Corporate Structure.*—Division 4 of the I.C.C. has approved the plan by which this road and its subsidiary, the Fort Worth & Denver, will simplify the corporate and capital structure of Colorado & Southern Lines (*Railway Age*, April 21, page 74). The Forth Worth will acquire control of seven other subsidiary lines in Texas, and the seven separate companies will also be dissolved. The C&S owns the stock of these seven companies, but will turn it over to the FW&D for $16,472,117 in cash and bonds.

Division 4 authorized the Fort Worth line to issue $17,000,000 of first mortgage 4⅜ per cent bonds, to be guaranteed by the C&S. Proceeds from sale of these bonds will be used by the Fort Worth to acquire the subsidiary-company stock from the C&S, and to pay off a note held by the Reconstruction Finance Corporation. The C&S will use the cash it acquires to repurchase its own refunding and extension mortgage bonds and to redeem publicly held general mortgage bonds.

System debt, other than equipment obligations, will be reduced to $17,000,000 by this consolidation and simplification program. The new first mortgage bonds will be dated May 1, 1952, and will mature May 1, 1982. There will be provisions for redemption prior to maturity and for sinking fund.

Table of Selected Income and Balance Sheet Items of Class I Steam Railways for February and two months of 1952 appears on page 93.

Florida East Coast.—*Reorganization.*—Division 4 of the I.C.C. has approved payment of allowances totaling $280,682.61 to various parties of interest for the period from May 16, 1948, through December 10, 1951. The various groups had asked for $614,074.94. Allowances are to be paid out of the debtor's estate.

Missouri-Kansas-Texas.—*New Directors.*—Kenneth A. Spencer, president of the Spencer Chemical Company and the Pittsburgh & Midway Mining Co., Kansas City, Mo., has been elected a director for a term of three years. Frank M. Porter, president of the Fain-Porter Drilling Company, Oklahoma City, Okla., has been elected for two years, and William L. Kistler, Jr., president of W. L. Kistler, Inc., Tulsa, Okla., for one year. At succeeding annual meetings of the board, seven directors will be elected, each for three years.

Port Angeles Western and Sol Duc Investment Company.—*Receiver's Certificates.*—Justin Martin, receiver of the railroad and investment company, has obtained authority from the I.C.C. to issue $10,000 of receiver's certificates. Proceeds will be used to pay expenses of administration of the receivership, and to pay two installments on the purchase price of the railroad properties. The installments, in the amount of $2,750 each, were due February 13 and March 13. The certificates, bearing interest at 4 per cent, will be issued primarily to shippers and others who are interested in rehabilitation of the road.

St. Louis-San Francisco. — *New Directors.*—At the first annual meeting since the company emerged from trusteeship on January 1, 1947, stockholders elected four new members of the board and re-elected the present 17 members. The new members are: Lewis B. Stuart, financial vice-president, Ralston Purina Company, St. Louis; Robert J. Stone, vice-president — operations, Frisco; Lester E. Cox, president, Ozark Motor & Supply Co.; and Benedict K. Goodman, former president of the Chicago Produce Trust (now Chicago Produce District).

Seaboard Air Line. — *Baltimore Steam Packet Company Debentures.*—The I.C.C. has modified a 1941 order so as to authorize this road to dispose of $1,500,000 of packet company debentures. The packet company wishes to purchase the debentures for retirement

gives freight of any weight a "passenger" ride

All types of loads, from paper cups to steel beams or heavy castings get a "Comfortable" ride at all speeds, with Barber Variable Friction Stabilized Trucks.

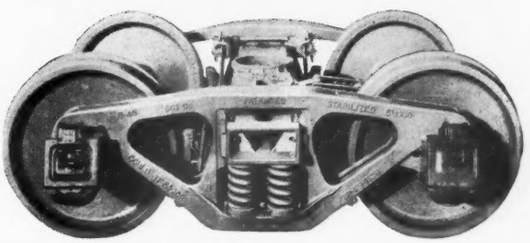
After the initial compression of the springs, there is a first-stage period of soft damping, which gives a soft ride, of special benefit to light loads.

If the load is heavy or at high speed, heavier damping action is activated, given exceptional protection against "over-solid" blows.

Furthermore, the side springs carry their share of the load, thus adding to the capacity of Barber Trucks.

Over 325,000 Car Sets of Barber Trucks Have Been Specified.

BARBER



STABILIZED TRUCK

5911R

STANDARD CAR TRUCK COMPANY
332 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS

on or before July 1. The 1941 order authorizing the Seaboard to acquire these debentures contained a provision restricting their disposal.

New Securities

Application has been filed with the I.C.C. by:

CHICAGO, ROCK ISLAND & PACIFIC.—To assume liability for $2,400,000 of series N equipment trust certificates, to finance in part 29 diesel-electric locomotive units costing an estimated $3,391,154. The locomotives are as follows:

	Description and Builder	Estimated Unit Cost
13	1,500-hp. general-purpose units (Electro-Motive Division, General Motors Corporation)	$148,858
11	800-hp. switching units (Electro-Motive)	91,000
5	800-hp. switching units (Baldwin-Lima-Hamilton Corporation)	91,000

The certificates, to be dated August 1, would mature in 24 semiannual installments of $100,000 each, beginning February 1, 1953. They would be sold by competitive bids, with the interest rate to be set by such bids.

ILLINOIS TERMINAL.—To assume liability for $1,660,000 of series E equipment trust certificates, to finance in part 275 freight cars costing an estimated $1,852,900. The cars are as follows:

	Description and Builder	Estimated Unit Cost
150	70-ton open-top hopper cars (General American Transportation Corporation	$6,763
100	50-ton solid-end gondola cars (Pressed Steel Car Company	6,367
25	70-ton drop-end gondola cars (Greenville Steel Car Company)	8,071

The certificates, dated July 1, would mature in 20 semiannual installments of $83,000 each, beginning January 1, 1953. They would be sold by competitive bidding, with the interest rate to be set by such bids.

TENNESSEE CENTRAL.—To assume liabiliy for a $622,800 loan from the Reconstruction Finance Corporation proceeds from which would be used to construct 7.5 miles of spur and tipple tracks in Putnam county, Tenn. The road would issue notes to the R.F.C. The notes, with interest at 5 per cent, would mature on or before July 1, 1970. The R.F.C. loan would come under the Defense Production Act, and the new rail line would enable the TC to serve a large steam generating plant which the Tennessee Valley Authority is constructing near Kingston, Tenn.

VIRGINIAN.—To assume liability for $1,350,000 of series B equipment trust certificates to finance in part 300 50-ton box cars costing an estimated $1,735,263. The cars would be acquired from the Pullman-Standard Car Manufacturing Company, at a cost of $5,961 each. The certificates, dated July 1, would mature in 15 annual installments of $90,000 each, beginning July 1, 1953. They would be sold by competitive bidding, with the interest rate to be set by such bids.

Division 4 of the I.C.C. has **authorized:**

CHICAGO & EASTERN ILLINOIS.—To issue 41,487 shares of no-par common stock to pay off an accumulated dividend of $2 a share on the road's Class A preferred stock. For purposes of the exchange, the new stock will have a stated value of $18.50 a share. C&EI stockholders approved the stock dividend at a meeting on May 9. The commission noted that net earnings of the road in 1951 were sufficient to pay the $2 dividend on Class A stock but the board of directors advised conserving cash resources and paying the dividend with shares of fully-paid common stock (*Railway Age*, May 26, page 60).

ILLINOIS CENTRAL.—To issue and sell $25,000,000 of series D consolidated mortgage bonds, proceeds from which will be used to redeem other bonds maturing in 1952-53 and 1955 (*Railway Age*, May 12, page 80). The road will sell $13,000,000 of the new bonds at present, and the remainder will be sold on or about April 1, 1954. The bonds, with interest at 4¼ per cent, will be sold to seven insurance companies. The issue will mature June 1, 1982. Authority to sell the new series D bonds without competitive bidding was granted by the I.C.C.

Dividends Declared

CANADIAN PACIFIC.—common, 75¢, payable August 1 to holders of record June 24; 4% non-cumulative preference, 2%, semiannual, payable August 1 to holders of record June 27.

EAST PENNSYLVANIA.—$1.50, semiannual, payable July 15 to holders of record July 1.

MAHONING COAL.—common, $10, quarterly; 5% preferred, $1.25, semiannual, both payable July 1 to holders of record June 23.

NORWICH & WORCESTER.—8% preferred, $2, quarterly, payable July 1 to holders of record June 16.

PIEDMONT & NORTHERN.—75¢, quarterly, payable July 21 to holders of record July 5.

PROVIDENCE & WORCESTER.—$2.50, quarterly, payable July 1 to holders of record June 16.

ROCHESTER & GENESSEE.—$2, semiannual, payable July 1 to holders of record June 20.

STONY BROOK.—$2.50, reduced semiannual, payable July 7 to holders of record June 30.

TEXAS & PACIFIC.—$1.25, quarterly; 5% non-cumulative preferred, $1.25 quarterly, both payable June 30 to holders of record June 23.

TUNNEL R.R. CO. OF ST. LOUIS.—$3, semiannual, payable July 1 to holders of record June 16.

WARE RIVER.—guaranteed, $3.50, semiannual, payable July 2 to holders of record June 18.

Security Price Averages

	June 17	Prev. Week	Last Year
Average price of 20 representative railway stocks	62.59	62.69	52.96
Average price of 20 representative railway bonds	93.90	93.78	92.68

RAILWAY OFFICERS

EXECUTIVE

C. M. Yohe Becomes President of P&LE

As reported in *Railway Age* June 16, page 75, Curtis M. Yohe has been elected president of the Pittsburgh & Lake Erie (New York Central subsidiary) and John F. Nash has been named to succeed Mr. Yohe as vice-president. Mr. Yohe succeeds Gustav Metzman, president of the parent NYC, who becomes chairman of the board of the P&LE.

Mr. Yohe was born at Connellsville, Pa., on September 22, 1887, and received his LL.B. degree from Cornell University in 1910. He entered railroad service in 1919 as assistant purchasing agent with the P&LE and was appointed purchasing agent in June 1922. In March 1928 Mr. Yohe became assistant to president of the NYC and in May 1929 he was named vice-president (operations) of the P&LE and the Lake Erie & Eastern, which position he held until his recent election to the presidency of the P&LE. A photograph of Mr. Yohe appears on page 10.

John F. Nash

Mr. Nash was born at Syracuse, N. Y., in 1909 and entered railroad service there in 1925 as a clerk in the NYC freight station. He was appointed car service agent in the office of the assistant general manager in 1941 and the next year was appointed special agent to the superintendent at Buffalo, subsequently becoming assistant trainmaster and trainmaster there. In 1948 Mr. Nash returned to Syracuse as assistant to general manager and later that year he was appointed assistant superintendent of the Boston & Albany at Boston. On March 1, 1950, he became superintendent of the Mohawk and Hudson division of the NYC at Albany and in March 1951 he was named general manager of the B&A at Boston.

E. D. Winslow, whose retirement as assistant to vice-president and general manager of the MISSOURI-KANSAS-TEXAS was reported in *Railway Age* on May 26, began his railway career in 1898 as a clerk for the Texas & Pacific at Shreveport, La. For a short period, he was employed by the Mexican Central (now National of Mexico), and in 1902 joined the Rock Island, where he served in several clerical capacities until 1914. During the next year he was statistical clerk for the General Managers Association at Chicago, returning to the T&P in 1915. In 1921 he joined the M-K-T as service inspector, and, after holding several clerical positions, was appointed assistant to vice-president, operation, in 1924. He was appointed assistant to vice-president and general manager in 1927.

E. D. Winslow

FINANCIAL, LEGAL & ACCOUNTING

William J. Powell, whose appointment as assistant general counsel for the MINNEAPOLIS & ST. LOUIS was announced in *Railway Age* on June 2, has served as general attorney for the railroad for the past five years. He was graduated from the University of Minnesota Law School in 1938 and was in private law practice until 1942

when he entered government service with the Office of Price Administration. Later that year he entered the Army and was discharged in 1946. He returned to private practice for a short period before joining the M&StL

SPECIAL

J. C. Stephenson has been appointed chief examiner for the SOUTHERN PACIFIC at San Francisco. **L. D. Bush** has been named assistant manager of personnel, also with headquarters at San Francisco.

OPERATING

R. D. Shelton, whose appointment as assistant general manager of the SANTA FE at Los Angeles, was reported by *Railway Age* on May 26, has spent his entire railway career with that company. Beginning as an apprentice telegrapher, he was promoted to telegraph operator in 1920. He served successively as train dispatcher, night chief dispatcher, and chief dispatcher, and in 1941 was appointed trainmaster. After serving in that capacity at several points, he was named superintendent in 1949. Mr. Shelton was superintendent at Fresno, Cal., at the time of his recent promotion.

Arthur J. Sheehy, whose appointment as superintendent of the Saratoga-Champlain division of the DELAWARE & HUDSON at Albany, N.Y., was reported by *Railway Age* on May 12, was born at West Addison, Vt., on May 3, 1886. He began railroad work in November 1903 in the maintenance department of the Lake Champlain & Moriah at Port Henry, N.Y., and was later a trainman and conductor. He entered the service of the D&H in August 1907

Arthur J. Sheehy

as a trainman, being promoted to yard conductor, assistant yardmaster, night yardmaster, and in June 1914 to general yardmaster. In March 1920 he was appointed assistant trainmaster, and in 1944 trainmaster on the Saratoga-Champlain division. He became assistant superintendent of that division in 1949 and was appointed to his present position on May 1 of this year.

L. P. Bergman, whose retirement as general manager of the RAILWAY EXPRESS AGENCY at Los Angeles was

L. P. Bergman

reported by *Railway Age* on May 19, entered the express service at Oklahoma City, Okla., in 1900. He served

Selected Income and Balance-Sheet Items of Class I Steam Railways in the United States

Compiled from 127 reports (Form IBS) representing 131 steam railways

(Switching and Terminal Companies Not Included)

Income Items	United States: For the month of February 1952	For the month of February 1951	For the two months of 1952	For the two months of 1951
1. Net railway operating income	$75,894,507	$18,975,852	$141,962,384	$98,150,079
2. Other income	16,279,736	17,570,510	34,274,925	37,277,804
3. Total income	92,174,243	36,546,362	176,237,309	135,427,883
4. Miscellaneous deductions from income	4,312,477	4,126,335	8,773,216	8,631,771
5. Income available for fixed charges	87,861,766	32,420,027	167,464,093	126,796,112
6. Fixed charges:				
6–01. Rent for leased roads and equipment	9,642,415	7,872,603	19,024,517	17,678,638
6–02. Interest deductions[1]	25,811,397	24,699,100	51,512,506	49,518,918
6–03. Amortization of discount on funded debt	253,593	215,235	479,249	431,632
6–04. Total fixed charges	35,707,405	32,786,938	71,016,272	67,629,187
7. Income after fixed charges	52,154,361	d366,911	96,447,821	59,166,924
8. Other deductions	2,910,608	3,045,579	5,839,983	6,080,731
9. Net income	49,243,753	d3,412,490	90,607,838	53,086,193
10. Depreciation (Way and structures and Equipment)	38,835,544	37,194,255	77,727,055	74,664,922
11. Amortization of defense projects				
12. Federal income taxes	52,343,847	21,803,352	98,585,509	78,618,938
13. Dividend appropriations:				
13–01. On common stock	28,196,207	26,244,118	33,665,913	32,391,552
13–02. On preferred stock	16,419,143	32,525,780	23,505,801	39,121,662
Ratio of income to fixed charges (Item 5 ÷6—04)	2.46	.99	2.36	1.87

Selected Expenditure and Asset Items	United States: Balance at end of February 1952	Balance at end of February 1951
17. Expenditures (gross) for additions and betterments—Road	$47,813,040	$42,169,639
18. Expenditures (gross) for additions and betterments—Equipment	187,564,360	123,367,130
19. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	476,821,449	476,246,817
20. Other unadjusted debits	88,337,510	104,093,649
21. Cash	897,267,574	946,807,024
22. Temporary cash investments	908,338,704	1,040,191,972
23. Special deposits	70,710,768	118,532,134
24. Loans and bills receivable	1,387,493	1,644,954
25. Traffic and car-service balances—Dr.	58,713,029	48,341,261
26. Net balance receivable from agents and conductors	167,812,700	170,128,179
27. Miscellaneous accounts receivable	472,126,634	450,339,102
28. Materials and supplies	930,899,328	786,012,999
29. Interest and dividends receivable	17,285,978	15,374,053
30. Accrued accounts receivable	221,105,491	223,820,649
31. Other current assets	36,550,369	35,541,926
32. Total current assets (items 21 to 31)	3,782,198,068	3,836,734,253
Selected Liability Items		
40. Funded debt maturing within 6 months[2]	$186,480,804	$146,375,827
41. Loans and bills payable[3]	2,930,000	4,259,000
42. Traffic and car-service balances—Cr.	106,924,813	116,942,927
43. Audited accounts and wages payable	532,264,758	588,742,361
44. Miscellaneous accounts payable	191,655,493	202,810,138
45. Interest matured unpaid	29,466,494	30,506,668
46. Dividends matured unpaid	13,157,800	10,636,006
47. Unmatured interest accrued	95,871,601	93,851,800
48. Unmatured dividends declared	57,334,816	71,326,733
49. Accrued accounts payable	276,464,397	223,197,143
50. Taxes accrued	977,306,193	943,291,857
51. Other current liabilities	88,306,780	94,127,431
52. Total current liabilities (items 41 to 51)	2,371,683,145	2,379,692,064
53. Analysis of taxes accrued:		
53–01. U. S. Government taxes	818,972,837	795,580,209
53–02. Other than U. S. Government taxes	158,333,356	147,711,648
54. Other unadjusted credits	286,514,037	276,796,927

d Decrease, deficit, or other reverse items.
[1] Represents accruals, including the amount in default.
[2] Includes payments of principal of long-term debt (other than long-term debt in default) which becomes due within six months after close of month of report.
[3] Includes obligations which mature not more than one year after date of issue.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission.
Subject to revision.

FOR SAFETY'S SAKE..

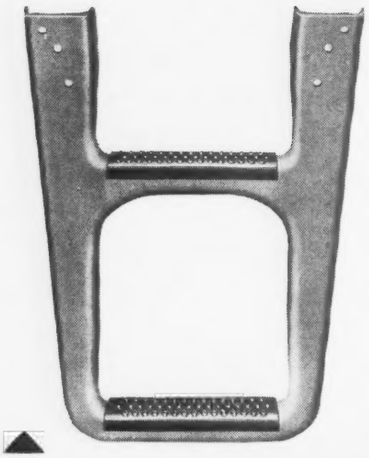
ALWAYS

SPECIFY

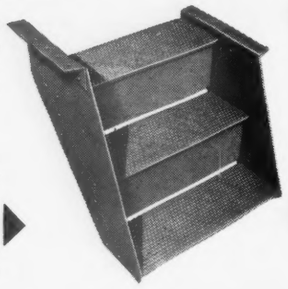
BUTTONS STAY SHARP

Button edges are constantly sharpened through wear and are thus able to present a sure, gripping surface at all times.

MORTON KASS Safety Treads



Locomotive stirrup steps may be made safe permanently with Morton Kass Safety Treads. Perforated buttons provide ever-sharp footage.



Kass Safety Treads are furnished as an integral part of Morton Step Flights; also, they can be provided separately for attachment by car builders or railroads who make their own step sides.

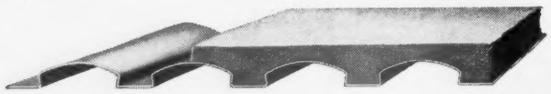
CHECK THESE FEATURES

✓ **SELF-SHARPENING PERFORATED BUTTONS.** Non-dulling feature (see diagram above) means positive, lasting protection against accidents—a sure foothold in all directions, in any kind of weather.

✓ **DURABILITY.** Fabricated of mild steel, stainless or other alloy steels, or aluminum. Same thickness of metal at top of safety buttons as in flat surfaces between. This means longer life!

✓ **VERSATILITY.** Available in practically any shape for replacements and new installations—may be self-supporting or fastened to existing surfaces. Smooth flange margins as desired. Available with flared nosings and with any number of flanges as specified.

✓ **ECONOMY.** Morton Kass Safety Tread is lower in cost, lighter in weight and wears longer. Also easier to install; no maintenance problem.



Morton "Chanarch" Steel Flooring is the ideal support for composition flooring. Narrow dovetail sections serve as anchorage for floor composition. Arches, designed for maximum load-carrying ability, reduce the amount of top surfacing needed. Choice of metals and gauges.

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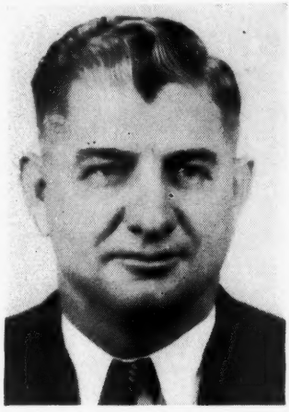
in various positions in several western states, being appointed general manager in 1936. He has since held that position in several western operating territories.

As reported in *Railway Age* May 19, **H. H. Hill** has been named superintendent transportation of the Northern division of the ATLANTIC COAST LINE at Savannah, Ga. Mr. Hill was born in



H. H. Hill

Colleton county, S.C., on January 22, 1905, and entered the service of the ACL on April 3, 1926, as an apprentice foreman on extra gang at Ridgeland, S.C. He was named roadmaster at Charleston, S.C., on May 1, 1940, general roadmaster at Rocky Mount in 1944, and superintendent of the Richmond district at Rocky Mount on January 1, 1949.

TRAFFIC

The ERIE has established a sales agency in Mexico City to facilitate the handling of increasing freight traffic to and from Mexico. **Rual M. Campos** has been named general Mexican manager, with offices at Isabel La Catolica 45, Mexico 1, D.F. He is a former assistant freight traffic manager of the National Railways of Mexico, and for a number of years, including the World War II period, was in Washington, D. C., where he handled all shipping permits for railroad freight cars entering Mexico.

C. F. Messenkopf, general traffic manager of the RAILWAY EXPRESS AGENCY, has retired after more than 50 years of service. Mr. Messenkopf began his express career in 1902 at

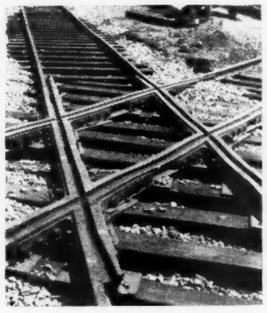
C. F. Messenkopf

New York with Wells Fargo & Co., a predecessor of REA, and advanced through various positions to become assistant traffic manager and traffic manager. He was appointed general traffic manager in 1947.

E. M. Jones has been appointed foreign freight agent of the MISSOURI PACIFIC at New York, succeeding **R. M. Hutchison,** deceased.

Kelly M. Fogg, assistant general freight agent of the SANTA FE at Houston, has been appointed general freight agent at Chicago, succeeding **R. G. Nicholson,** who has retired. Mr. Fogg was first employed as apprentice operator for the Gulf, Colorado & Santa Fe in 1900. He joined the AT&SF in 1920, and held various operator and ticket clerk positions until 1930, when he was appointed chief clerk to division freight and passenger agent. Subsequently, he was named city freight

(Continued on page 98)



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FROGS — SWITCHES

Your Railroad Track Material requirements tailor-made exactly to specifications. NELSON IRON WORKS, backed by years of know-how in this highly specialized business; is a recognized leader in the field.

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WILLSON
dependable
respiratory protection

keep on the safe side

wear **WILLSON RESPIRATORS**

Like these comfortable respirators, all Willson safety equipment is made after careful study of industry's needs. Through this continuing research you get many comfort and safety improvements first in Willson products. Ask for Willson—largest line of respirators for industry, farm and home use.

Universal Gas Mask Style WUG

Approved by U. S. Bureau of Mines for toxic smokes and gases, including carbon monoxide.

Chemical Cartridge Respirator

No. 831 Protects against common industrial gases and vapors in low concentration. Bureau of Mines Approval No. 2302.

No. 880 for metal fumes, mists and dusts. Same facepiece as No. 831, with replaceable dust filters. Comfortable under welding helmet. Bureau of Mines Approval No. 2149

See your Willson distributor or write for bulletin
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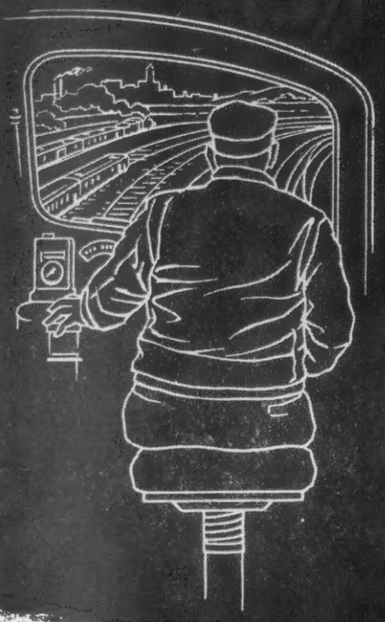
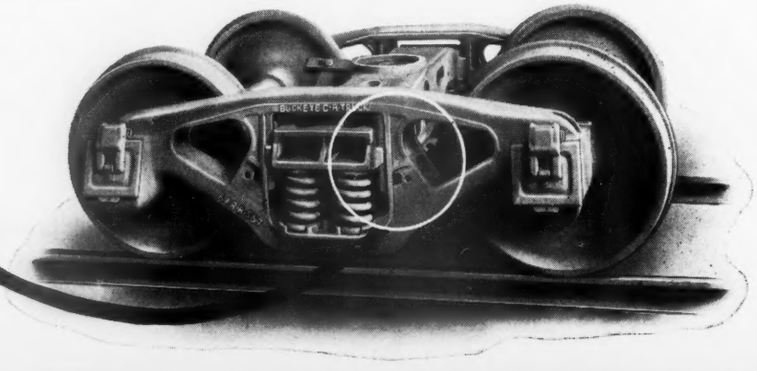
241 Washington St., Reading, Pennsylvania

In the Buckeye C-R Truck



FULL WIDTH BEARING IS EASY ON THE SEAT

The full width bearing of the friction wedge against the side frame and the bolster results in low unit pressures on these seats thereby reducing wear and increasing service life.



THE BUCKEYE STEEL CASTINGS COMPANY

New York, N. Y. Columbus, Ohio Chicago, Ill.

DAMAGE TO BOXCAR FLOORING...

ONE OF THE MAJOR PROBLEMS...

IN SUPPLYING GOOD ORDER

GENERAL SERVICE CARS*

* Report of Committee on Car Construction, Association of American Railroads (1951).

On Cars of 45 Major Railroads

Nailable Steel Flooring provides floors that last!

Time and millions of on-the-job miles have proved the value of NAILABLE STEEL FLOORING in general-service cars.

Whether you are building or rebuilding boxcars, flats, or gondolas, get the facts on NAILABLE STEEL FLOORING. Weigh carefully its cost versus value in providing a positive answer to a major problem—and a means to realize future operating economies.

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PATENTS PENDING

51-SF-11

GREAT LAKES STEEL CORPORATION

Steel Floor Division • Ecorse, Detroit 29, Michigan

PRODUCER OF N-A-X HIGH-TENSILE STEEL

NATIONAL STEEL CORPORATION

(Continued from page 95)

and passenger agent, city freight agent, traveling freight and passenger agent, and, in 1946, division freight and passenger agent. He was appointed assistant general freight agent in 1949.

Mr. Nicholson began railway service with the Wisconsin Central in 1898 as a clerk. In 1900 he joined the Santa Fe and held several clerical positions before being appointed assistant general freight agent in 1922. He was named general freight agent in 1927.

The ST. LOUIS-SAN FRANCISCO has opened a traffic office in Greenville, S.C., in the South Carolina National Bank building. **A. Carleton Hancock,** traffic representative at Atlanta, Ga., has been appointed general agent in charge of the Greenville office.

Chilton Roberts has been appointed general industrial agent of the ATLANTIC COAST LINE at Boston, Mass.

Malcolm N. Vienne, general eastern freight agent (sales and service) of the NORFOLK SOUTHERN, has been promoted to assistant freight traffic manager (sales and service), with headquarters as before at New York. **J. Milton Dillard,** general southern freight agent (sales and service), also has been promoted to assistant freight traffic manager (sales and service), with headquarters as before at Atlanta, Ga. **J. R. Bull** has been promoted to assistant general freight agent (sales and service) at Norfolk, and **E. J. Hastings** has been promoted to general agent at Boston, Mass.

B. L. Odend'hal, Jr., special divisions representative of the SEABOARD AIR LINE, has been appointed assistant general freight agent, to handle the line's divisions, with headquarters as before at Norfolk, Va.

George W. Cleland, general agent, rail passenger department, of the CANADIAN PACIFIC, at Chicago, has been appointed assistant general passenger agent at Vancouver, B.C.

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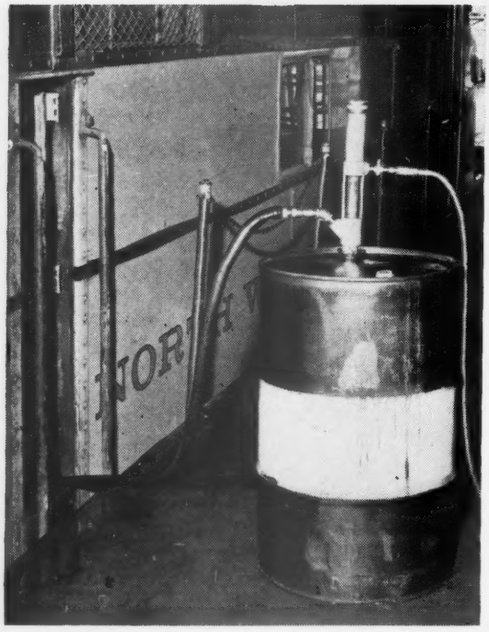

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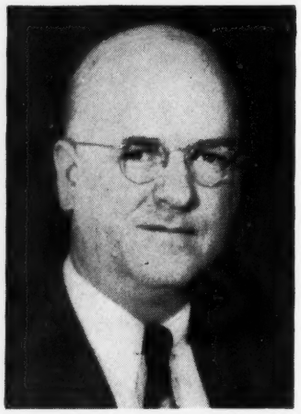
MECHANICAL

Gordon E. McKinney has been appointed chief electrical engineer of the ERIE at Cleveland, as reported in *Railway Age* June 2, page 102. Mr. McKinney was born at Ruston, La., 54 years ago and was graduated from Louisiana Polytechnic Institute in 1915. He joined the Erie as a special apprentice in the Jersey City shops in 1916 and subsequently advanced to electrician foreman at Kent, Ohio, supervising electrician at Youngstown and



Gordon E. McKinney

supervisor of electrical repairs at Hornell and Jersey City. Mr. McKinney served as electrical engineer for the entire system from 1943 until his recent promotion.

PURCHASES & STORES

J. F. McAlpine, assistant general purchasing agent for the BURLINGTON, has been appointed director of purchases and stores. **Joseph P. Blum,** general purchasing agent, has retired. **H. V. Schlitz,** assistant general purchasing agent, has been named general purchasing agent. **C. E. Swanson,** gen-

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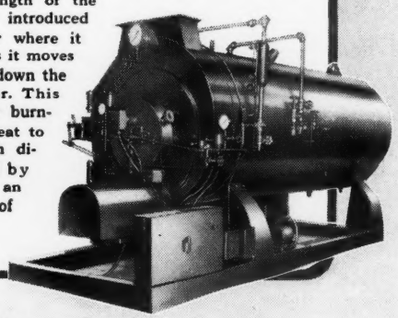
Yes, 3 square feet of heating surface with Cyclonic Combustion equals 5 square feet of heating surface offered to you by other packaged boiler units.

The Cyclotherm Cyclonic Combustion Principle is an entirely new and amazingly different method of heat transfer in the boiler industry. Air enters the combustion chamber at extremely high velocity in a revolving spiral vortex which travels the entire length of the furnace. The fuel is introduced into the entering air where it is slowly consumed as it moves in a cyclonic motion down the combustion chamber. This highly luminous slow burning flame radiating heat to the fire tube through direct radiation and by convection, results in an unusually high rate of heat transfer.



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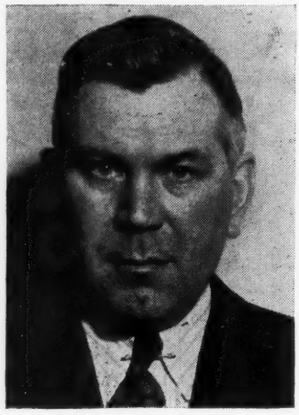
eral storekeeper, has been appointed assistant general purchasing agent. **R. A. Schuff,** assistant general storekeeper, has been named general storekeeper.

George J. House has been appointed assistant manager of stores of the ERIE in charge of diesel materials. The position of assistant to manager of stores has been abolished. Mr. House was born at Hornell, N.Y., 51 years ago and joined the Erie as a clerk in the stores department there in 1919. He advanced through various clerical posts, becoming sectional storekeeper at Meadville in 1924, storehouse foreman in 1927, assistant classification inspector in 1940, classification inspector in 1942, traveling inspector in 1943, classification inspector at Hornell in 1946, and assistant to manager of stores at Hornell in 1950.

ENGINEERING AND SIGNALING

John W. Wallenius has been appointed engineer maintenance of way of the Central region of the PENNSYLVANIA at Pittsburgh, as reported in *Railway Age* June 16. Mr. Wallenius was born at Springfield, Mass., and was graduated from Yale University in 1928. He joined the engineering corps of the Pennsylvania in 1929 at Pittsburgh and served as assistant supervisor and supervisor in New York, Ohio, Indiana and Maryland, prior to his advancement to assistant division engineer of the Philadelphia Terminal division in 1943. In 1944 he was promoted to division engineer of the



John W. Wallenius

Renovo division at Erie, Pa., and in January 1946 he became division engineer of the Long Island at Jamaica, N.Y. Mr. Wallenius was named assistant superintendent of the Chicago division in 1951.

J. T. Ward, office engineer of the SEABOARD AIR LINE, has been promoted to principal assistant engineer, with headquarters as before at Norfolk, Va.

As reported in *Railway Age* May 19, **Robert F. Raughley,** superintendent of telegraph and signals of the PENNSYLVANIA'S Western region, has retired. Mr. Raughley entered the service of the Pennsylvania as a clerk in 1903, and served successively as signal foreman, assistant inspector of signals, assistant supervisor of signals, supervisor of telegraph and signals on various divisions of the Central and Eastern regions, and in the general office at Philadelphia. He was appointed assistant superintendent of telegraph and signals for the Eastern region in 1933, and in 1937 was advanced to superintendent of telegraph and signals of the Western region at Chicago.

D. Collis, assistant district engineer of the CANADIAN PACIFIC at North Bay, Ont., has been appointed division engineer of the Laurentian division at Montreal, Que., succeeding **L. A. Comeau,** transferred.

OBITUARY

John W. Meredith, 90, who retired in 1930 as general superintendent of the CENTRAL OF NEW JERSEY, died on June 8 at his home in St. Petersburg, Fla.

John M. Emery, 82, who was manager of the Marine department of the DELAWARE, LACKAWANNA & WESTERN from 1909 to 1940, died in Stamford, Conn., hospital on June 10, after a brief illness.

CONSTRUCTION

Erie.—Construction of a new passenger station at Clifton, N. J., to replace a station damaged by fire several weeks ago, has been authorized by the board of directors. A. E. Kriesien, assistant vice-president and general manager of the Eastern district, said the proposed structure will be located at a new site so as not to interfere with a contemplated street improvement program. The railroad hopes to start construction by mid-July. About seven months will be required for completion. Tentative plans call for a building 28 ft. wide and 53 ft. long, with exterior walls of red brick.

Jersey Central Lines.—Contracts have been let for construction of a new combination freight and passenger station at Atlantic Highlands, N. J. The ranch-style structure, to be built by the Caruso Construction Company of Atlantic Highlands, will replace one damaged by fire December 16, 1951, and recently demolished. The new station will be 105 ft. long with a maxi-

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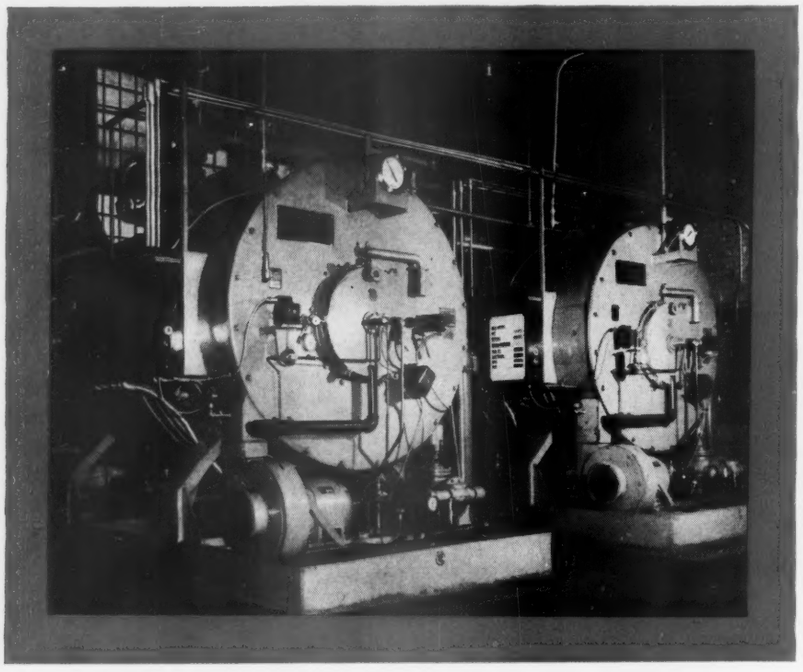
mum width of 19 ft. It will contain a waiting room, ticket office, lavatories, freight area, employees' locker room and boiler room.

Louisville & Nashville-Nashville, Chattanooga & St. Louis.—Connecting tracks to Radnor yard, now being built near Nashville, Tenn., are in the initial stages of construction. Three main tracks are being laid over a route six miles in length, at a cost of $2,660,000, by the Oman Construction Company, the Codell Construction Company and the Nashville Bridge Company. The work involves seven major structures and the handling of 650,000 cu. yd. of fill.

• **New Orleans Union Passenger Terminal.**—All foundation work on the new passenger station has been completed and erection of structural steel will commence shortly. The Chris Larsen Company of New Orleans and the Steel Construction Company of Birmingham, Ala., are undertaking this phase of the work at a cost of approximately $2,250,000.

The Lionel F. Favret Company, of New Orleans, is erecting the new coach and Pullman service building in the coach yard at a cost of about $306,603. This work is about 50 per cent completed. Railroad operations have been transferred to a portion of the coach yard that has been completed and work on the remainder of the yard is proceeding under contract by the Gervais F. Favrot Company at a cost of about $168,697. Completion of the entire coach yard is expected in early fall. Signaling and interlocking facilities, being installed by the General Railway Signal Company at a cost of $938,000, are about 50 per cent completed. Track work, being carried out under contract by the William A. Smith Construction Company, is approximately 85 per cent complete.



AMESTEAM Pays For Itself In 3 Years on K. & I. T.

Here's tops in economy! The busy Kentucky & Indiana Terminal Railroad installed two 250 hp. AMESTEAM Generators and two electric compressors to service its Louisville roundhouse, shops and yards. This new power plant is netting this important switching railroad an annual saving of $15,000 to $20,000, equivalent to one-third the cost of the installation.

The AMESTEAM Generator is completely automatic; no boiler room attendants are required. Burns all types of fuel oil from Bunker C down to No. 1, as well as natural gas. Better than 80% thermal efficiency is guaranteed. Single units from 10 to 600 hp. Design pressure — 15 to 200 lbs.

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ABANDONMENTS

Norfolk Southern.—The I.C.C. has postponed for an indefinite time the effective date of its recent order authorizing this road to abandon a 23.2-mile branch between Star, N. C., and Asheboro and a 6.2-mile line between Plainview, N. C., and Ellerbe. Several protestants have asked for reconsideration, the commission said. (*Railway Age*, May 12, page 79.)

Application has been filed with the I.C.C. by:

ARTEMUS-JELLICO.—To abandon its entire line, which extends from Anchor, Ky., to Artemus, 11.45 mi. Coal mines from which the road was getting its traffic have been abandoned, the application said. It also noted that "all passenger and mail" revenue and "practically all" of the road's l.c.l. business was lost in the years following 1939, when a highway paralleling its line was built.

GREAT NORTHERN.—To abandon 20.2 miles of branch line, from Kila, Mont., to Hubbard. Continued operation is not warranted by present or prospective traffic, the road said.

ILLINOIS CENTRAL.—To abandon its harbor and incline facilities at Brookport, Ill., and discontinue towage service on the Ohio river between Brookport and Paducah, Ky. The road said it has made little use of the facilities in recent years, and the abandonment would have no adverse effect on the shipping public.

ILLINOIS TERMINAL.—To abandon its 59.6-mile line between Forsyth, Ill., and Mackinaw Junction. The line passes through the city of Bloomington, where trackage is laid on several principal streets, the road said. Curves are so sharp that standard freight cars cannot be moved through the streets coupled together, a situation which cannot be corrected without "extraordinary expense," it added.

TRANS FLORIDA CENTRAL.—To abandon its entire line, extending from Sebastian, Fla., to Broadmoor, 10.4 miles. The road has another 5.4 miles of trackage between Broadmoor and Fellsmere, but this segment has not been operated for several years. There is not sufficient traffic to support the line, the road said.

Division 4 of the I.C.C. has **authorized:**

ATLANTIC COAST LINE.—To abandon a 0.9-mile segment of branch line at Palatka, Fla.

HUNTINGDON & BROAD TOP MOUNTAIN.—To abandon branch line segments totaling 13.7 miles in Bedford and Huntingdon counties, Pa.

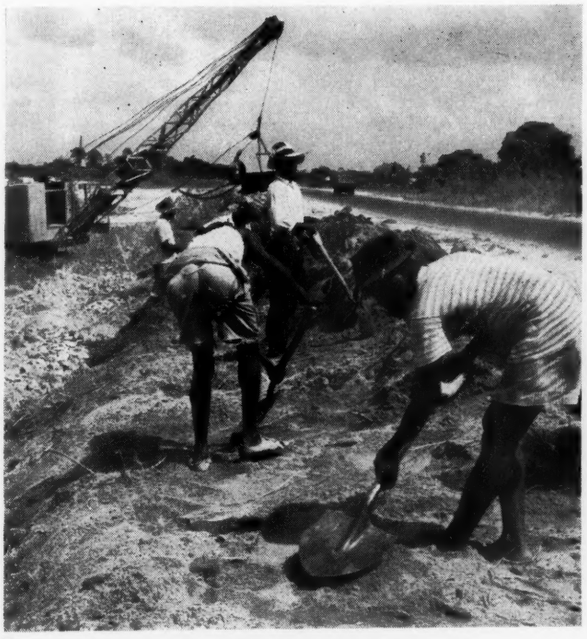
LEHIGH VALLEY.—To abandon its Hazle Creek branch, from Gara Junction, Pa., to Hazle Creek Junction, 1.36 miles. No operations have been conducted over the branch in the past five years.

MAINE CENTRAL.—To abandon that portion of its line extending from Rumford Junction, in Auburn, Me., to Canton, 35.9 miles. Savings from abandonment will help the road refund three issues of securities maturing in the next three years, the commission said.

MINNEAPOLIS & ST. LOUIS.—To abandon that portion of its Corwith branch from Denhart, Iowa, to Corwith, 4.3 miles.

NORTHERN PACIFIC.—To abandon a 2.6-mile portion of its Fond du Lac branch from New Duluth, Minn. to Fond du Lac. Service over the segment was discontinued in 1950.

READING.—To abandon branch line segments totaling about one mile at Shenandoah, Pa. Removal of the line will clear the way for further strip mining of coal in the area. This coal traffic will produce gross revenues of approximately $5,280,000, the road estimates.



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Baltimore & Ohio photograph

First RR in Liberia Adds Iron Ore to U. S. Supply

The available iron ore supply of the United States was considerably augmented when a 42-in. gage railroad was completed last year between Monrovia, the capital and chief seaport of Liberia, and the Bomi Hills. Said to be the first railroad in Liberia, the new line, which has 41½ miles of main track and 1 mile of yard tracks and sidings, was built by the Liberian Mining Company, a subsidiary of the Republic Steel Corporation, to tap an iron ore deposit estimated to contain 24,000,000 tons of lump ore.

Ore in the Bomi Hills has a reported iron content ranging up to 70 per cent, as compared to around 50 per cent iron content of average ore from the Great Lakes mining area.

1—Native laborers at work on the roadbed of the new railroad, which parallels the paved highway that has replaced native trails.

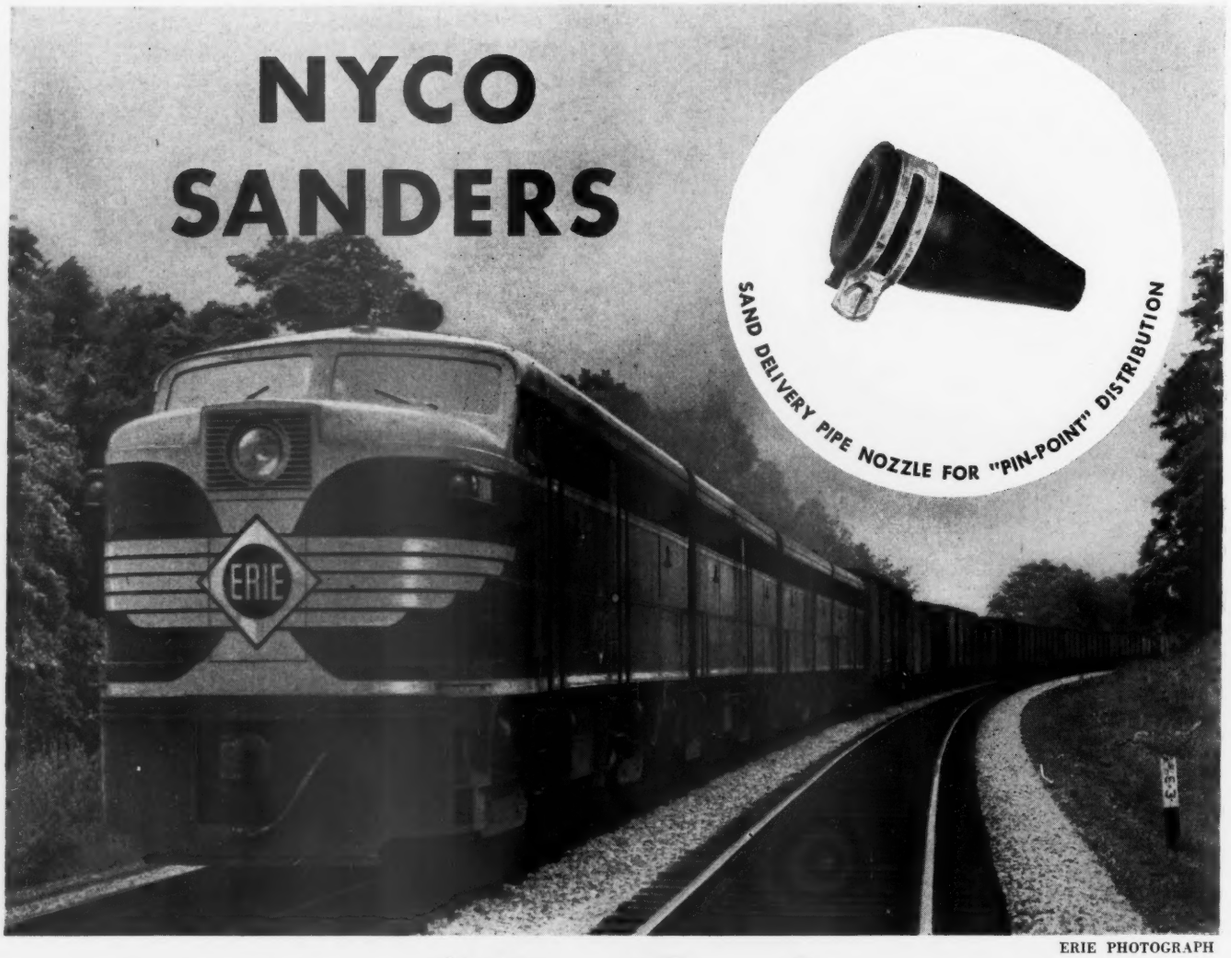
2—A train passing over one of the line's bridges, indicative of the permanent character of the roadway and structures.

3—The line is well ballasted and graded. The tree-trunk barricade was the work of a disgruntled landowner.

4—Native village along the railroad, here nearing completion, is typical of the territory served by the line.

Five Baltimore & Ohio trackmen—Howard J. Young, Samuel J. Hite, Bayne C. Edwards, W. W. Darst and Joseph O. O'Brien—were flown to Africa to help in the construction of the ore-carrying railroad. When the job was completed, four of the B&O men returned to the United States. The fifth, Mr. Young, was made superintendent of the new line and remained in Africa.

Equipment in use on the line includes three 675-hp. 75-ton diesel-electric locomotive units built by the Whitcomb Locomotive Company; 60 50-ton hopper-bottom cars constructed by the Gregg Company, and 90-lb. rail. Wooden ties were laid on crushed stone ballast. Construction of two bridges, each 180 ft. long, and about 40 smaller bridges from 30 ft. to 70 ft. long, was necessary. Dock facilities consist of a ramp from which the ore cars dump their contents into a hopper. The hopper feeds the ore to a conveyor belt which carries it to a steamship alongside the dock, or to a stacker which places the ore on a stock pile.



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